March 2023

INFRASTRUCTURE SECTOR IN EGYPT – OVERVIEW



Think Tank Egypt-TTE 26-3-2023



Infrastructure sector in Egypt

Report Contents

Introduction.

1. The Egyptian economy.

- 1.1. Economic indicators.
- 1.2. Challenges.
- 1.3. Opportunities.

2. Egypt Infrastructure Profile.

- 2.1. Hard infrastructure.
- 2.2. Soft infrastructure.
- 2.3. Egypt infrastructure indicators.
- 2.4. Egypt Global Competitiveness Infrastructure Indicators.
- 2.5. Infrastructure economic indicators.
- 2.6. Infrastructure funding gap.
- 2.7. Key players.
- 2.8. Egypt's 2030 infrastructure Sector Strategy Goals.
- 2.9. Achieved projects.

3. Investment opportunities.

4. Analysis and outcomes.



Introduction

Infrastructure sector is a significant economic factor in Egypt. Population area increased from 6% to 12% in 2022. Infrastructure sector contribute 8.7% to GDP. Egyptian economic reform is invested in rural and Infrastructure development because it reduces poverty and unemployment rate during last 5 years. This report will present the current state of Egypt infrastructure, forecast and investment opportunities in the country, as well as the types of produce and funding methods of Infrastructure processes.

In short, it will shed light on the fundamentals of Egypt's Infrastructure economy.

1. Egyptian economy.

Due to aggressive monetary tightening, a falling pound, import controls, and rising inflation, the economy is likely to lose steam in October-December 2022 compared to July-September 2022. Inflation increased to 31.9% in February 2023 from 21.3% in December 2022.

The inflation rate in February 2023 was the highest since November 2017. The increase was primarily due to rising food prices, as well as transportation costs.

The consensus predicts that inflation will slow slightly by year's end 2023 but will remain well in double digits due to the shaky pound.



1.1 Economic indicators:

Population:	106,620,265citizen
1-Economic indicators	
Purchasing power in USD.	\$ 1.388 trillion
GDP in USD.	\$ 424 B
GDP growth rate	3.9%
Gold reserve in Tons	126
Labor force	28.159 M
Unemployment Rate	7.2%
Inflation	31.9%
Budget deficit as percent of GDP	-6.8%
External debt	\$ 155.7 B
Gov. debt as a percent of GDP	87.2%
FDI	\$ 8.994 B
Tax	22.5%
Personal income tax	25 %
Exports in USD.	\$ 53.8 B
Imports in USD.	\$ 80.9 B
Trade balance in USD.	\$ (-26.9) B

1.2. Challenges.

a) The foreign currency shortage.

Since the start of Russia's war in Ukraine, approximately \$25 billion in foreign indirect investments, primarily in local debt instruments (hot money), have fled the domestic market, resulting in a significant shortage of the US dollar on the market liquidity level as well as in the country's foreign currency reserves.

This problem has hampered Egypt's imports, which are currently being held up in ports due to a lack of dollars required for the customs, as a result, basic goods are scarce in the domestic market. The foreign currency shortage has also pushed up US dollar prices in the parallel market, which have risen above EGP 30.

b) Inflation.

Egypt's inflation rate has been rapidly increasing since March 2022, reaching more than 21% by the end of November 2022, the highest level in nearly five years. Inflation is being driven primarily by rising food and beverage prices, as well as rising service prices. According to the CBE, November's inflation figure was primarily influenced by the Egyptian pound's devaluation in October and the ongoing consequences of the Russia-Ukraine conflict.

Annual food inflation has been primarily driven by core food inflation since the start of the calendar year 2022, CBE added.



c) Debt.

Egypt has already adopted a medium term strategy of debt management that aims to sustain the downward path of the country's internal debt to GDP ratio to run at 71.9% by FY2026/2027, down from the current 87.2%. The shortage of US dollars, as well as the country's goal of achieving 5% real GDP growth in the current fiscal year 2022/2023

Egypt's external debt increased to \$155.7 billion (37.2% of FY2021/2022 GDP) at the end of June 2022, up from \$137.9 billion (32.3 percent of GDP) at the end of June 2021.

d) Real GDP growth.

With all of these challenges, Egypt will find it difficult to achieve real GDP growth in 2023.

The country's expected growth in 2022 fell from 6.5% before the Ukrainian war to 5% afterward. It intends to achieve 5.5% growth in 2023.

Egypt achieved 6.2% real GDP growth in FY2021/2022, which is expected to slow before increasing to 7% in FY 2025/2026 and FY2026/2027.

The World Bank reduced its forecast for Egypt's real GDP growth in FY2022/2023 to 4.5% in December, down from 4.8% in October and below the 6.6% achieved in FY2021/2022, owing primarily to the fallout from the Russian-Ukrainian conflict and the pandemic.

1.3 Opportunities.

I. Economy Expanding.

Egypt's economy is expected to improve continuously for a variety of reasons. The Zohr field, discovered in 2015, is an excellent source of liquefied natural gas (LNG) production in Egypt, which obviously increases the foreign currency reserves. Tourism programs also another major source of foreign currency. Recent discoveries of Oil and Gas in the Gulf of Suez are also expected to benefit the country, particularly in terms of foreign investment.

II. Rapid population growth.

Egypt's population is growing at an exponential rate. On the one hand, this growth will bring with it a slew of problems, but if managed properly, Egypt will reap significant benefits. The greater the number of people contributing to the country's growing economy, the better. Of course, the private sector must be further developed and expanded in order to capitalize on this massive working-class opportunity.



INFRASTRUCTURE SECTOR IN EGYPT – OVERVIEW

III. Modernization of the economy.

As Egypt moves forward it is vital for the country to work on improving the hang-ups in the economic sphere. The trick is to utilize the resources as efficiently as possible at lower costs.



2. Egypt infrastructure profile

Egypt extended the investment in infrastructure during last 8 years; Egyptian government spent more than \$ 400 billion. Over the last decade, the sector has grown significantly.

And, after a brief slowdown due to the COVID-19 outbreak, the sector is expected to grow 9% on average between 2023 and 2024.

This expansion will be fueled primarily by active public-private partnerships and the expansion of green buildings to increase energy efficiency and high-end infrastructure.

For most Egyptians, the real estate sector has always been regarded as a safe-haven investment, as its value has maintained and even increased.

The Egyptian government is a significant investor in the infrastructure sector.

The Egyptian government's construction of a massive "New Administrative Capital" 30 miles east of Cairo is a high-profile example.

The project's first phase, which includes all cabinet ministries and authorities, is nearly finished, and the government expects to move by the end of June 2023.

In addition, the government is upgrading airports, ports, and transportation networks.

In total, the Ministry of Transport has approximately 25 railway projects in the works.

The government's top priority is to connect cities with adequate transportation and to build roads and ports to support industrial expansion.

Egypt has announced the construction of a High-Speed Train that will connect the entire country in stages.

This \$8.7 billion project was awarded to Siemens as the prime contractor.

Egypt intends to build up to 14 new smart cities across the country.

Egypt completed infrastructure projects worth approximately EGP 1.7 trillion in less than two years.



2.1 Hard infrastructure:

Roads Network: Egypt's road network spans 195500 km including paved and dusty roads during 2022. Egypt's road quality now ranks second in Africa and 28th place globally, rising 90 ranks since previous years, according to the "Global Competitiveness Reports".

The Egyptian government has spearheaded significant investment in the road system, as of end-2019 Egypt's National Roads Project – implemented in 2014 – had developed 4500 km of a pledged 7000 km of new roads in the country. An improved road network will support economic development, reduce traffic congestion and improve overall safety.

The government has made additional investments in the land transport segment following the creation of the National Roads Project, and in early 2020, the Ministry of Transport announced a budget of \$9.8bn for road development. In FY 2018/19 over 2000 road projects were carried out, and another 2000 were completed in FY 2019/20.

Despite lockdown measures implemented during the Covid-19 pandemic, construction activity continued on Cairo's new road projects. The projects are part of an \$895m government plan to reduce road congestion and build 40 new bridges. While the majority of the work is concentrated in East Cairo, construction is also being carried out elsewhere – including on the Ahmed Hamdy Tunnel 2 link, which will run under the Suez Canal and is slated for completed in mid-2021. An additional \$142m was spent building road infrastructure in New Alamein City, an urban development to the west of Alexandria on Egypt's north coast.

One significant road project is the recently completed suspension bridge that crosses the Nile River at Warraq Island to the north of Cairo and forms part of a link stretching from the Red Sea to the northwest extremity of Egypt's Mediterranean coast. It was inaugurated by President Abdel Fattah El Sisi in May 2019 and is the widest such bridge in the world.

According to the ministry of planning, the government allocated around 16.9 billion Egyptian pounds for the national road network "Investment plan 2020/2021".

Commercial Ports: The port extensions are expected to strengthen Egypt's position along one of the world's busiest trade routes and further enhance the strategic advantage of the Suez Canal, the country's strongest asset for international commerce.

- **Alexandria Port**, with a maximum Capacity 36.8 million ton/year.
- **El-Dekheila Port**, with a maximum Capacity 22.1 million ton/year.

INFRASTRUCTURE SECTOR IN EGYPT – OVERVIEW



- **Damietta Port,** with a maximum capacity 19.75 million tons/year.
- **Suez Port**, with maximum Capacity 6.6 million tons (general cargo)/year.
- Nuwaiba Port, with maximum capacity 1.9 million tons (general cargo)/year.
- **Hurghada Port**, with maximum capacity 250 Thousand Passengers.
- Sharm El Sheikh Port, with maximum capacity 100'000 passengers.
- **Safaga Port**, with maximum Capacity 6.37 million tons/year.

SCZONE ports include 6 ports:

- **Port Said Port**, with maximum Capacity 12,175 million tons/year.
- **Arish Port**, with maximum Capacity 1.2 million tons/year.
- **Sokhna Port**, with maximum Capacity 8.5 million ton/year.
- East Port Said Port, with maximum Capacity 6 million ton/year.
- Adabyia Port, with maximum Capacity 7.93 million tones/year.
- **Al-Tour port**, with maximum Capacity 0.38 million ton (General Cargo)/Year.

Water Supply

Nile River: The main water infrastructure in Egypt is on the Nile River, notably the Aswan High Dam, the Aswan Old Dam and a number of downstream barrages. The Aswan Old Dam has a storage volume of 5 BCM/year. The Aswan High Dam was built upstream of the Aswan Old Dam with a reservoir (Lake Nasser) of 162 BCM.

Canal System: Water in the Nile River is diverted to agricultural lands through a hierarchy of public canals that include main canals, secondary (or branch) canals and sub-branch canals. The branch canals deliver water into private canals.

Drainage System: An intensive open drainage system was constructed along the Nile downstream of the Aswan High Dam to transfer excess irrigation water to the Mediterranean Sea and terminal lakes. At present, the system covers all the cultivated land in the Nile Valley and Delta. It is about 16,686 km in length, of which 67% is in the Delta region and the rest is in Upper and Middle Egypt.

Hydropower: Hydropower is generated at the Aswan High Dam, the Aswan Old Dam and the Esna and Nag Hammadi barrages. Hydropower makes up about 3% of Egypt's energy production.



<u>Airports:</u> Along with road and sea transport, Egypt's air segment has expanded over the years, led both country's geographic position as a regional air transfer point and by its fast-growing population.

Cairo International Airport, which currently has three terminals, is the continent's second-busiest airport after Johannesburg. The expansion of terminal 2 was completed in 2015 and increased the airport's handling annual capacity from 18m to 26m passengers.

International airports, there are 11 international airports including:

- Cairo International Airport
- Hurghada International Airport
- Sharm El sheikh International Airport
- Aswan International Airport
- Luxor International Airport
- Borg El Arab International Airport
- Alexandria International Airport
- Assuit International Airport
- Taba International Airport
- Marsa Matrouh International Airport
- Sohag International Airport

International – Internal Airports, there are 4 International/Internal airports including:

- El Arish International Airport
- Sharq El Owainat Airport
- St.Catherine International Airport
- Abu Simbel Airport

Internal Airports, there are 4 internal airports including:

- Port Said Airport
- Tur Sinai Airport
- El Dakhla Airport
- El Kharga Airport

BOT Airports, including:

- Marsa Alam international airport
- El Alamain international airport



2.2 Soft infrastructure

Health:

1- The total value of public spending on the health sector in the budget for the fiscal year 2021/2022 amounted to about 108.8 billion pounds, an increase rate of 15.3 billion pounds (or about 16%) over the allocations for the health sector in the fiscal year 2020/2021, which amounted to about 93.5 billion pounds.

2-The total number of the health insurance beneficiaries is 57 million citizens until 2021. The number of health facilities affiliated to the public and private sectors in Egypt is estimated to be about 2,034 in 2020, and the cost of developing the infrastructure and medical equipment in 18 model university hospitals, including departments and emergency hospitals, amounted to 2.7 billion pounds.

Education:

The investments allocated for the educational sector are estimated at EGP 77.2 billion in the fiscal year 2022/2023. Covers additional schools in rural areas, mobile classrooms and construction of five new public universities across Egypt. Production of the educational sector is expected to increase to EGP 214.8 billion in 2022/2023 instead of EGP 184.7 billion in 2021-2022.

ICT:

Direct investments amounting to EGP 67.1 billion for the communications and information technology sector, compared to EGP 58.2 billion for investments expected by the end of the previous year 2022/21, with a growth rate of 15%

The percentage of sector investments to the total investments in the plan reaches 5%.

Regarding the objectives of the communications and information technology sector in the (FY 2022/2023) plan, the Ministry of Planning's report indicated that the sector's production is expected to increase by about 20% at current prices, and by 14.3% at constant prices.

About output, it was projected to increase by approximately 21% at current prices, and 14.4% at consistent prices. This will result in a contribution rate of 2.9% to 3%, based on GDP.



2.3 Egypt infrastructure indicators

Indicator	2022
Roads and bridges	
Road network (paved- unpaved roads)	195,500 Kilometers
Roads length	7000 kilometers
Developed roads	5000 kilometers
Bridges	2500
Railways	
Network in 2020	9570 kilometers
Network in 2024	10.200 kilometers
Network in 2030	11.530 kilometers
Number of passengers in 2020	900.000
Number of passengers in 2024	1,500,000 /day
Number of stations	750
Freight in 2020	4.5 million tons
Freight in 2024	25 million tons
Airports	
International airports	27
Number of passengers	41 million/year
Electricity and energy	
Power generation	59,893 MW
Drinking water source	
Urban	100%
Rural	98%

2.4 Egypt Global Competitiveness Infrastructure Indicators

Indicator	Rank
Infrastructure	52
Transportation	44
Road connectivity	52
Quality	28
Railroad density	70
Efficiency of railway	50
Airport connectivity	40
Efficiency of air transport	46
Liner shipping connectivity	18
Efficiency of seaport	41
Utilities	64
Electricity access	72
Electricity supply quality	77
ICT	106
Mobile- cellular subscriptions	109
Mobile- broadband subscriptions	100
Internet subscriptions	109
Internet users	98



2.5 Infrastructure economic indicators:

Egypt spent more than \$400 billion on infrastructure during the period (2014-2022)

This is almost 22% of Africa spending on infrastructure, infrastructure and construction sector absorb almost 20% of total labor force in Egypt.

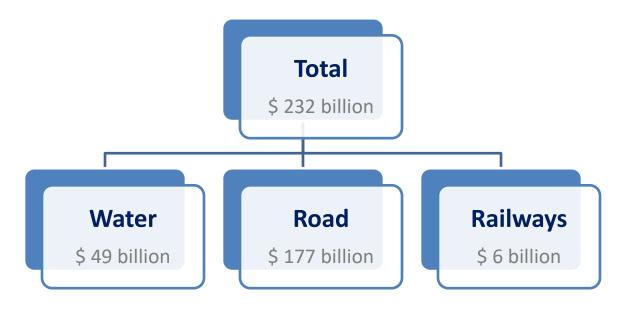
Infrastructure in Egypt attracted FDI more than \$ 17.8 billion last five years

Gulf countries, World Bank, IMF and EBRD finances many infrastructure mega projects in Egypt.

Infrastructure Outlook estimated Egypt's infrastructure needs at least USD 675 billion until 2030, of which USD, 445 billion is expected to come from government authorities, leaving a USD 232 billion investment gap.

The government has earmarked about EGP 750 billion (60%) for scaling up Egypt's infrastructure further. During H1 2021/2022, EGP 240 billion in investments were injected into infrastructure, over 75% of which were public investments and mainly allocated to transportation (25%), real estate (13%) water and drainage (9%) and construction (8%).

2.6 Infrastructure funding gap (2022-2030)





2.7 Key players

- Government
- Private sector
- Foreign companies

2.8 Egypt's 2030 strategy goals for the Infrastructure sector:

Economic development: By 2030, the Egyptian economy is a balanced, knowledge-based, competitive, diversified, market economy, characterized by a stable macroeconomic environment, capable of achieving sustainable inclusive growth. An active global player responding to international developments, maximizing value added, generating decent and productive jobs, and a real GDP per capita reaching high-middle income countries level.

Energy: An energy sector meeting national sustainable development requirements and maximizing the efficient use of various traditional and renewable resources contributing to economic growth, competitiveness, achieving social justice, and preserving the environment, A renewable energy and efficient resource management leader, and an innovative sector capable of forecasting and adapting to local, regional and international developments and complying with **SDGs**

Health: All Egyptians enjoy a healthy, safe, and secure life through an integrated, accessible, high Quality, universal healthcare system capable of improving health conditions through early.

Intervention and preventive coverage, ensuring protection for the vulnerable, and achieving.

Satisfaction of citizens and health sector employees, this will lead to prosperity, welfare,

Happiness, as well as social and economic development, which will qualify Egypt to become

a leader in the field of healthcare services and research in the Arab world and Africa.

Education and training: A high quality education and training system available to all, without discrimination within an efficient, just, sustainable and flexible institutional framework, Providing the necessary skills to students and trainees to think creatively, and empower them technically and technologically.

Urban development: A balanced spatial development management of land and resources to accommodate population and improve the quality of their lives.



Programs and projects for infrastructure development until 2030

- 1. Suez Canal axis development project.
- The new administrative capital.
- Sinai Corporation for development and investment.
- 4. Northwest coast development project.
- 5. New development new Galala city.
- The fourth and fifth phases of underground project.
- 7. Building one million social housing units.
- Transform Egypt to a global digital hub.
- 9. National project for high-speed internet.
- 10. Developing the digital community to enhance efficiency and transparency for all institutions.
- 11. Establishing new urban communities to achieve integrated development.
- 12. Rationalization water usage.
- 13. Rehabilitation of mega water pumping station.
- 14. Water resources development.
- 15. Water quality improvement.
- 16. Developing groundwater and facing its infringement.
- 17. Developing covered sewage networks.
- 18. Establishing new cities on new development axis.
- 19. Improving road network for development.
- 20. Developing national railway networks.
- 21. Developing maritime transportation sector.
- 22. Developing river transportation sector.



2.9 Achieved projects: Since 2014, the government has launched several major investment projects to boost the economy and attract more private investment, with the strengthened macroeconomic environment and growing investment appetite, investment projects in Egypt are gaining momentum, bringing mutual benefits to the economy.

Total investment in fiscal year 2020/21 was 760.6 billion EGP (US\$48.4 billion), with public sector investment accounting for 74%.

Energy: Egypt has developed its energy sources in several ways, guided by the Integrated Sustainable Energy Strategy established for 2015-2035. The country is on track to become a regional energy hub with offshore hydrocarbon discoveries and alternative energy mega projects in the Eastern Mediterranean aiming to achieve 40% clean energy by 2035. Egypt aims to complete multiple solar power projects with a total capacity of 3.2 gig watts (GW) by 2023.

Natural gas: Egypt has achieved self-sufficiency in natural gas thanks to the Zohr gas field, discovered by Italy's Eni in August 2015 and estimated to be the largest gas field in the Mediterranean. Eni holds his 60% stake in the project, Rosneft 30% and BP 10%. The project is being developed by Petrobel, a joint venture (JV) between Eni and his state-owned Egypt General Petroleum Corporation (EGPC), on behalf of Petroshorouk, jointly owned by Eni and its partners and a state-owned Egyptian company, being run by Natural Gas Holding Company (EGAS). Daily production from Zohr expected to exceed 3 billion cubic feet, accounting for 40% of Egypt's total gas production. The total reserves of the Zohr gas field are estimated at 30 trillion cubic feet.

Key developments in the natural gas sector include:

Green Energy: In November 2022, Egypt hosted the UN climate change conference COP27 in Sharm El Sheikh. In addition to active large-scale solar and wind projects, Egypt aims to produce blue hydrogen (using natural gas) in the short to medium term, and eventually green hydrogen (using renewable energy sources) will be produced.

• The government is also upgrading the existing hydropower station, which will have a total capacity of 2,400 megawatts (MW) when completed by the end of 2022.

Benban Solar Park: At 37 square kilometers (km²), Aswan's Benban Solar Park is the largest grid-connected solar park in Africa and the fourth largest in the world. Launched in December 2019, Benban Solar Park has 32 power plants with a capacity of 1.47 GW developed by 30 companies from 12 countries with a total investment of US\$2 billion. These projects were developed as part of Egypt's feed-in tariff scheme launched in 2014 to boost the renewable energy industry.



Kom Ombo Solar Plant: Located about 50 km north of Aswan, the Kom Ombo Solar Power Plant will add 200 MW of power capacity and will power 130,000 households when it comes online. The plant will be built by ACWA Power in Saudi Arabia and is expected to be completed in the second quarter of 2022. EBRD, OPEC Fund for International Development, African Development Bank, Green Climate Fund, and Arab Bank sign US\$114 million financing package with ACWA to power solar plant construction already done.

El Dabaa Nuclear Power Plant: The El Dabaa Nuclear Power Plant (NPP), located on the north coast about 170 km from Alexandria, will house four reactors with a combined capacity of 4.7 GW. The nuclear power plant will be built and operated by the Russian State Atomic Energy Company (Rosatom) at a total cost of up to US\$28.5 billion. Rosatom will fuel the plant for 60 years. Russia has announced that about \$190 million has been allocated for infrastructure work in El Dabaa.

Other mega projects: Egypt has a number of national mega-projects underway to improve economic competitiveness, create job opportunities and attract private investment. With the cooperation of over 1,000 companies and nearly 2 million Egyptian workers, these national mega-projects are contributing to a new chapter in the country's economic development.

New Administrative Capital: The New Administrative Capital project stretches between New Cairo and Ain Sokhna over 700 sq. km (around 170,000 feddans) with a total of 24,500 planned buildings; it is expected to absorb a population of up to 7 million people.

Suez Canal Economic Zone (SCZone): SCZone was established in 2015 to develop the Suez Canal Region into a global center of international trade, industrial activity, logistics, technology and tourism. It covers 460 sq km and includes 4 industrial zones and 6 ports.

Integrated Sinai Economic Development: Egypt has secured \$2.7 billion to fund the Sinai Peninsula Development Program in 2020. The program focuses on sectors such as transport, higher education, community development, irrigation and water resources.

Transportation: Egypt has upgraded its infrastructure with increased investment in air, land and sea transport networks. Investment is dominated by the public sector. However, foreign and local investors are also very active in the industry. According to the World Economic Forum's Global Competitiveness Report 2020, Egypt ranked 28th out of 141 countries on the Road Quality Index, up 90 places from 2014 when it was 118th out of 140 countries.

Metro: Cairo's metro system, the oldest and largest city in Africa, is the capital's mass transit backbone, carrying more than 3.7 million passengers per day. With the expansion of Line 3, capacity it was expected to increase to about 6 million passengers per day, but COVID-19 delayed some of the construction. Work continues on Line 3, with Phase 4 being implemented at a total cost of €485 million (US\$553 million) plus 5.4 billion EGP (US\$298 million).



National Highway Network: Road infrastructure has undergone significant development since 2014 when the state initiated a 36 billion EGP (US\$2 billion) National Highway Project (NRP). It is currently in its fourth phase and when completed will add 13,000 km of roads to the network. this 2,173 projects totaling EGP 1.5 trillion (US\$96.9 billion) will be implemented from 2014 to 2024, according to the Ministry of Transport.

National Railways Network: The government has allocated EGP 141 billion (US\$9 billion) for the much-needed overhaul of the country's railways system by 2022. Aiming to increase the number of passengers per day two million, the plan will improve the current railways infrastructure, develop new lines and buy new locomotives and rolling stock. The Ministry of Transport is planning a high-speed railways network that will connect all the new cities with the three lines.

The first line connects Ain Sokhna and New Alamein in three phases.

- The first phase runs 122 km from New Administrative Capital to 6th of October City and connects to the new Rod el-Farag axis.
- The second phase will connect 6th of October City and New Alamein over 210 km parallel to the Rod el Farag-Dabaa axis.
- The third phase will span 92 km and connect the New Administrative Capital to Ain Sokhna.

The second line connects the city of 6th October and the administrative district from Upper Egypt to Aswan. As part of a project funded by EBRD.

The third line starts in Ain Sokhna and ends in Luxor via Hurghada and Marsa Alam, passing through Ain Sokhna and Luxor stations on the first and third lines. Passenger and freight trains have speeds of 250 km/h and 160 km/h respectively.

Water and water treatment: The G20 Global Infrastructure Outlook 2018 estimates that meeting the country's water needs will require an investment of US\$49 billion by 2030. The Ministry of Water Resources and Irrigation is advancing his \$50 billion plan to tackle water scarcity by 2037.



3. Investment opportunities:

As a result, the sector is expected to offer many opportunities for companies. The government is also participating in this boom by building affordable houses for its citizens and reconstructing the slums that have widely spread around the different cities. One of the State priorities is to rebuild these unplanned, overpopulated neighborhoods. These projects are managed under the affordable housing program.

Similarly, high-end housing compounds have also expanded in new suburbs around the Greater Cairo and the Red Sea and Mediterranean coasts. These coastal developments with their luxury developments are attracting investors.

Green Economy Opportunities: The Egyptian government's long-term strategic opportunities for National Determining Contributions (NDC) implementation through green investment are not described in the strategy document, but in a combination of sectorial strategies and initiatives focused primarily on mitigation actions. Key strategic, cross-sectorial and long-term opportunities include:

Implementation of 691 green projects worth approximately US\$27.6 billion, The Ministry of Planning, Ministry of Economic Development and Ministry of Environment have agreed that 30% of Egypt's investment projects in fiscal year 2020/21 will be implemented in accordance with ecological sustainability and green economy concepts. Moreover, the Egyptian government plans to increase this percentage to 100% between 2022 and 2024.

Implication of all the sectors covered in this part

Smart Transportation Sector Opportunities: Facilitate the shift from oil to gas for public transport

Increased freight and logistics activity on inland waterways, it includes the development and operation of river terminals and ports, and multimodal distribution centers.

Initial financial analysis indicates an internal rate of return (IRR) of over 15% without the need for subsidies, so private sector interest in operating a new high-quality transit service should be high.

Green Buildings and Smart Cities Sector: The labor and investment needed to develop Egypt's 15 new green cities could create opportunities for the private sector, which is also a major employer in Egypt. Through public-private partnerships, therefore, as investors, engineering companies or operators of some projects, it means that private sector capital, know-how and technology are essential to enabling smart infrastructure.

Water Resources and Irrigation Sector: Upgrading irrigation infrastructure in line with Egypt's ambitious green mega projects in Toshka and Sinai to support the transition to a lowcarbon, climate-resilient future. This provides an opportunity for the private sector, including



SMEs, to deploy climate-friendly irrigation technologies at the farm level to improve water conservation and water management by farmers.

Renewable Energy (RE) and Energy Efficiency (EE) Sector: The Integrated Sustainable Energy Strategy (ISES) aims to accelerate the achievement of the goal of 42% renewable energy in the electricity mix by 2035, with a total of 62.6 GW of renewable energy installed.

Given the technical challenges facing the RE and EE sector, the Egyptian government has introduced training and capacity building as one of the pillars of the RE and EE Plan 2018-2020. Implementation of this plan will provide the labor market with the ability to improve RE and EE. This is relevant for private sector investment in both the short and long term.

Waste Management Sector: Poor nationwide collection infrastructure provides opportunities for PPPs in collection services if private companies are given adequate incentives.

Government political interest in private sector involvement in waste management, as for the success story, an Egyptian agricultural waste recycling start-up called Baramoda solves the problem of water scarcity in agriculture by using agricultural waste to produce compost that fills the water needed for floor irrigation. We develop innovative solutions. 30%.

Waste management is now a top priority for the Egyptian government. The Administrative Plan for Solid Waste Recycling 2019-2023, finance waste management contracts, and strengthen the institutions, capacities of the recycling sector.

Egypt has 4 investment opportunities in ICT sector

Egypt has 36 investment opportunities in education sector

Egypt has 20 investment opportunities in electricity and renewable energy sector

Egypt has 15 investment opportunities in healthcare sector

Egypt has 2 investment opportunities in infrastructure sector

Egypt has 6 investment opportunities in oil and gas sector

Egypt has 114 investment opportunities in construction sector



4. The Analysis

Egypt's infrastructure status as one of the most crucial countries in the Middle East and Africa will undoubtedly help to the country's regional and international standing.

According to the UNDP Global Human Development Report for 2021-2022, Egypt's Human Development Index has risen by 19 places.

Egypt's major infrastructure projects which are now underway are expected to shape a new future for the North African country after decades of a growing population and random construction.

Egypt wants to position itself as energy hub in the Middle East. Still Egypt needs to invest \$ 675 billion in infrastructure till 2030 especially on transportation and water and drainage projects. BY 2030, Egypt will have spent nearly a trillion dollars on the country infrastructure, which creates a lot of the investment opportunities in the country.

Egypt is leading the world in developing strategies to create sustainable green infrastructure. While renewable energy is an important component of Egypt's green infrastructure agenda, it is not the entire picture.

Greening national spending has benefited greatly from concerted efforts. One main goal of Egypt's Environment Sustainability Criteria, which were adopted in 2019, is to ensure that 15% of government investment goes to green initiatives, with the goal of increasing to 50% by 2025.