Egypt

Africa

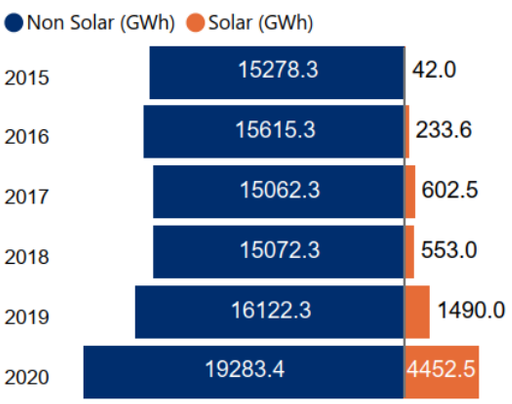
Ease of doing Solar classification

Influencer

Electricity Consumption in kWh/capita (2020)	Average PVout in kWh/kWp/day (2020)	Cumulative Solar Capacity in MW (2021)
1940.8	**5.2**	**1655.5**

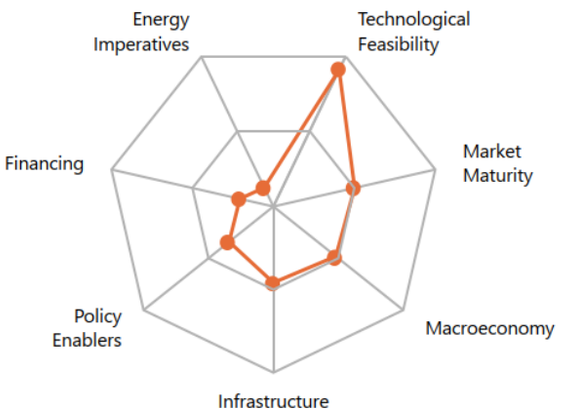
Getting Electricity Score (2020)	NDC Target by 2030 in % (base year 2005)	Human Development Index (2021)
77.9	**27.0**	**0.7**

Renewable Energy Generation by Source

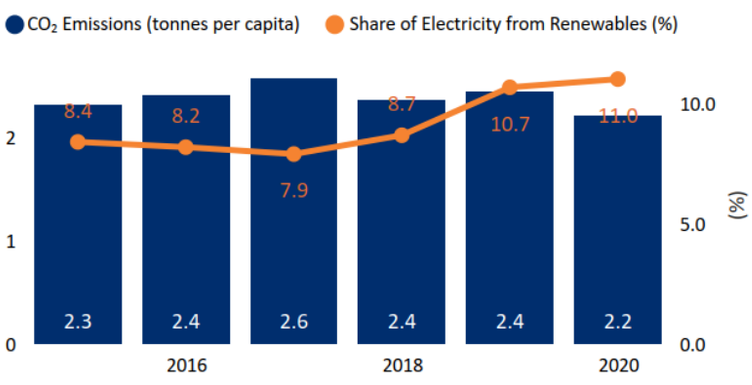


Non Solar RE includes Wind and Hydro;

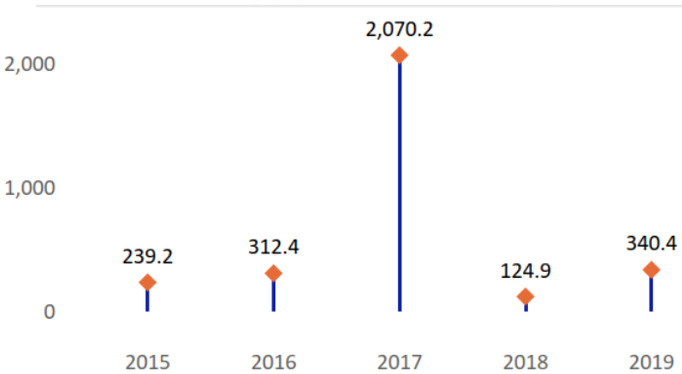
Performance against 7 Drivers



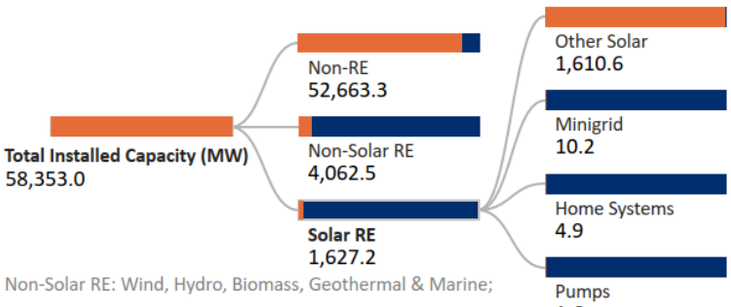
CO_2 Emissions vs Electricity share from Renewables



International Finance received for Clean Energy (Million US Dollars)



Installed Capacity by Source (2019)



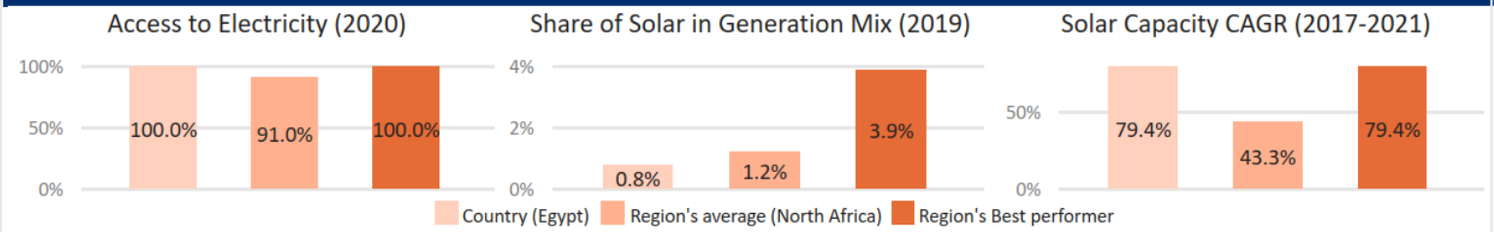
Non-Solar RE: Wind, Hydro, Biomass, Geothermal & Marine;
Non-RE: Coal, Natural Gas, Nuclear, Oil, etc.;
Other Solar: Utility Scale Solar, Rooftop etc.;
Data not available for other Solar RE segments;

Support for Renewables (2020)

Feed-in-Tariffs for renewable energy supply to the grid?	Net metering/Gross metering policies and regulations?
Yes	**Yes**

Renewable Energy Certificates?	Renewable Purchase Obligation?
No	**No**

Country's regional performance and characteristics



Areas of Strength

- Market Maturity
- Technological Feasibility

Areas of Improvement

- Energy Imperatives
- Financing

Key Insights

Drivers	Insights
Macro-economy	•Egypt is a lower middle-income country [1] with GDP per capita (PPP) of USD 12,706 as of 2021. [2] •GDP (Real) grew at an annual rate of 3.3% in 2021 and is estimated to increase by 5.9% in 2022. [3] •Total public debt in the country increased to 92% of GDP in 2021 from the levels of 87.9% in 2020. [4] •The fiscal deficit in the country narrowed down to 6.7% of GDP in 2021 from the levels of 7% in 2020. [4]
Policy enablers	• Egypt aims to increase the share of renewables in the electricity mix to 42% by 2035. [5] •New and Renewable Energy Authority (NREA) is responsible for the development of renewable energy and implementation of energy conservation programs in Egypt. [6] •The National Climate Change Council (NCCC) is responsible for addressing the impact of climate change into national development plan. [7] •National Climate Strategy 2050 aims to plan and manage climate change with a low-emissions approach. [7]
Technological Feasibility	• Egypt receives very high levels of solar irradiation of 6.1 kWh/m^2/day and specific yield of 5.2 kWh/kWp/day indicating a very strong technical feasibility for solar in the country. [8] •Egypt targets to facilitate the installation of at least 4 MWp of new decentralized PV capacity to mitigate 66 kilotons of CO_2. [9] •In 2022, Egyptian government signed an MOU with an Australian Green Energy Company to explore the development of a green hydrogen production project with 9.2 GW of installed capacity. [10]
Market Maturity	• 100% population in Egypt is having access to electricity since 2020. [11] •Egyptian Electric Utilities and Consumer Protection Regulatory Agency (Egypt ERA) is the energy regulator responsible for implementing policy decisions, administering licences, and setting tariffs. [12] •Egyptian Electricity Holding Company (EEHC) owns 90% of Egypt's generation capacity and the entire state-owned T&D network comprising one transmission and nine distribution companies. [12] •Egyptian Electricity Transmission Company (EETC) is the TSO responsible for management, operation, and maintenance of electric power transmission system in the country. [13]
Infrastructure	• Egypt's transmission network consists of overhead transmission lines and underground cables with a total length of 44,200 kms and a total transformer capacity of 99,600 MVA. [12] • Egypt's distribution network constitutes 460,897 km of low-voltage and medium-voltage lines and cables with a total transformation capacity of 71,103 MVA. [12] • Egypt has electricity interconnections with its neighbours, Jordan and Libya, for the import/export of electricity. [12]
Financing	• In 2021, the AfDB approved USD 27.2 Mn for the design, construction, and operation of a 200 MW PV solar power plant at Kom Ombo in Upper Egypt on the river Nile. [14] • In 2021, the AfDB approved €83 Mn to finance the second phase of Egypt's Electricity sector and Green Growth Support Program. [15] • In 2017, the AfDB approved USD 55 Mn to finance three solar PV Projects under the Feed-in-Tariff (FiT) Program in Egypt. [16]
Energy Imperatives	• The total installed capacity in the country stood at 58,353 MW in 2019. [17] • The total installed capacity of Solar PV witnessed a CAGR of 79.4% between 2017-2021 reaching 1,655.5 MW in 2021 from 160 MW levels in 2017. [18] • In 2020, the per capita electricity consumption stood at 1.94 MWh which is significantly lower in comparison to the global average of 3.31 MWh.[19] • The price of electricity in the country was 8 US Cents/kWh as of 2019. [20]