Ease of Doing Solar classification

Africa

Egypt

Electricity Consumption in kWh/capita (2020)
1940.8

Average PVout in kWh/kWp/day (2020)
5.2

Cumulative Solar Capacity in MW (2021)
1655.5

Getting Electricity Score (2020)
77.9

NDC Target by 2030 in % (base year 2005)
27.0

Human Development Index (2021)
0.7

Renewable Energy Generation by Source

<table>
<thead>
<tr>
<th>Year</th>
<th>Non Solar (GWh)</th>
<th>Solar (GWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>15278.3</td>
<td>42.0</td>
</tr>
<tr>
<td>2016</td>
<td>15615.3</td>
<td>233.6</td>
</tr>
<tr>
<td>2017</td>
<td>15062.3</td>
<td>602.5</td>
</tr>
<tr>
<td>2018</td>
<td>15072.3</td>
<td>553.0</td>
</tr>
<tr>
<td>2019</td>
<td>16122.3</td>
<td>1490.0</td>
</tr>
<tr>
<td>2020</td>
<td>19283.4</td>
<td>4452.5</td>
</tr>
</tbody>
</table>

Non Solar RE includes Wind and Hydro;

CO₂ Emissions vs Electricity share from Renewables

<table>
<thead>
<tr>
<th>Year</th>
<th>CO₂ Emissions (tonnes per capita)</th>
<th>Share of Electricity from Renewables (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2.3</td>
<td>8.4</td>
</tr>
<tr>
<td>2017</td>
<td>2.4</td>
<td>8.7</td>
</tr>
<tr>
<td>2018</td>
<td>2.6</td>
<td>10.7</td>
</tr>
<tr>
<td>2019</td>
<td>2.4</td>
<td>11.9</td>
</tr>
<tr>
<td>2020</td>
<td>2.2</td>
<td>10.0</td>
</tr>
</tbody>
</table>

International Finance received for Clean Energy (Million US Dollars)

- 2015: 239.2
- 2016: 312.4
- 2017: 124.9
- 2018: 340.4
- 2019: 2,070.2

Installed Capacity by Source (2019)

- Total Installed Capacity (MW): 58,353.0
- Non-RE: 52,663.3
- Non-Solar RE: 4,062.5
- Solar RE: 1,627.2

Support for Renewables (2020)

- Feed-in-Tariffs for renewable energy supply to the grid: Yes
- Net metering/Gross metering policies and regulations: Yes
- Renewable Energy Certificates?: No
- Renewable Purchase Obligation?: No
**Country's regional performance and characteristics**

- **Access to Electricity (2020)**: 100.0%
- **Share of Solar in Generation Mix (2019)**: 1.2%
- **Solar Capacity CAGR (2017-2021)**: 79.4%

- **Country (Egypt)**: 0.8%
- **Region's average (North Africa)**: 3.9%
- **Region's Best performer**

**Areas of Strength**
- Market Maturity
- Technological Feasibility

**Areas of Improvement**
- Energy Imperatives
- Financing

---

**Key Insights**

<table>
<thead>
<tr>
<th>Drivers</th>
<th>Insights</th>
</tr>
</thead>
</table>
| **Macroeconomy** | • Egypt is a lower middle-income country 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/m²/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 CO₂.⁹  
• 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 k.ms 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 Mln 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 Mln to finance the second phase of Egypt’s Electricity sector and Green Growth Support Program.¹⁵  
• In 2017, the AfDB approved USD 55 Mln 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 |