



**Mali**

Africa

Ease of doing Solar classification



**Progressive**

Electricity Consumption in kWh/capita (2020)

**158.0**

Average PVout in kWh/kWp/day (2020)

**4.7**

Cumulative Solar Capacity in MW (2021)

**99.5**

Getting Electricity Score (2020)

**51.8**

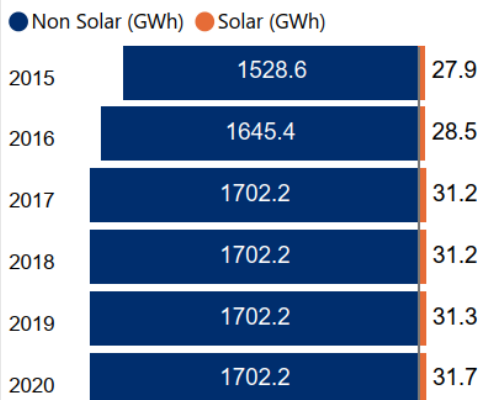
NDC Target by 2030 in % (base year 2005)

**Not available**

Human Development Index (2021)

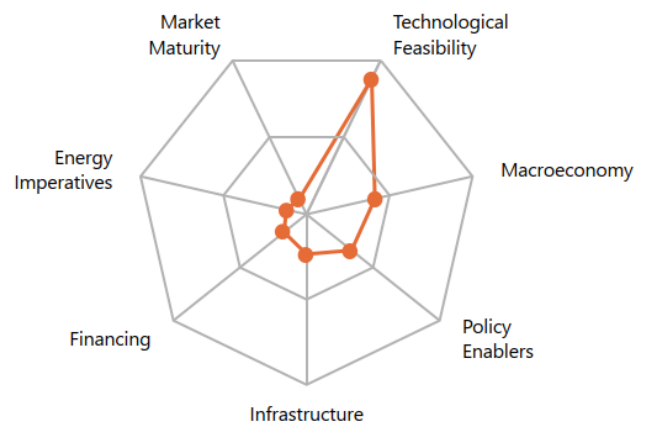
**0.4**

**Renewable Energy Generation by Source**

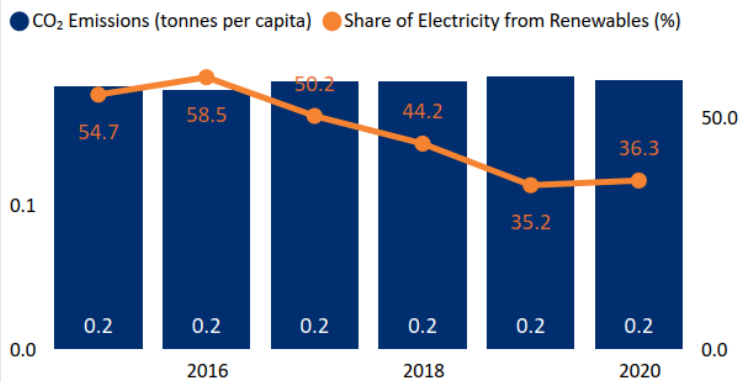


Non Solar RE includes Wind and Hydro;

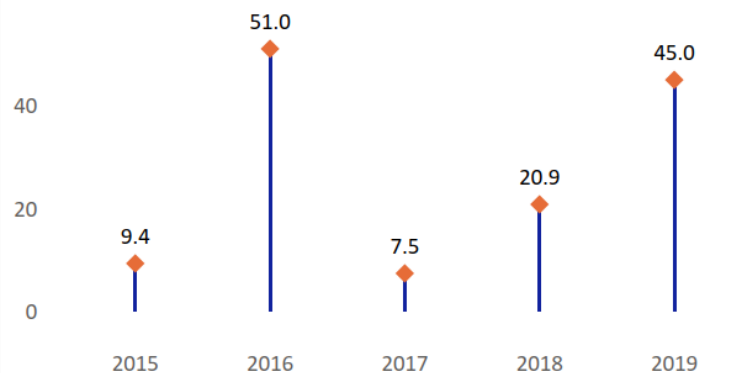
**Performance against 7 Drivers**



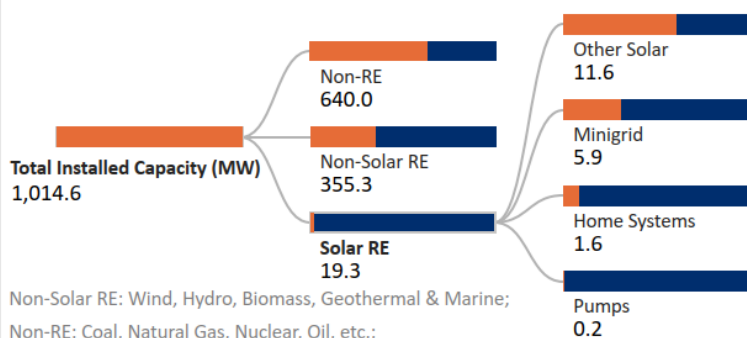
**CO<sub>2</sub> Emissions vs Electricity share from Renewables**



**International Finance received for Clean Energy (Million US Dollars)**

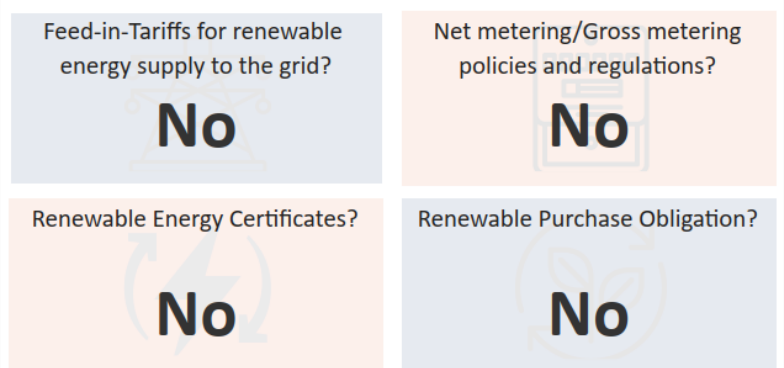


**Installed Capacity by Source (2019)**

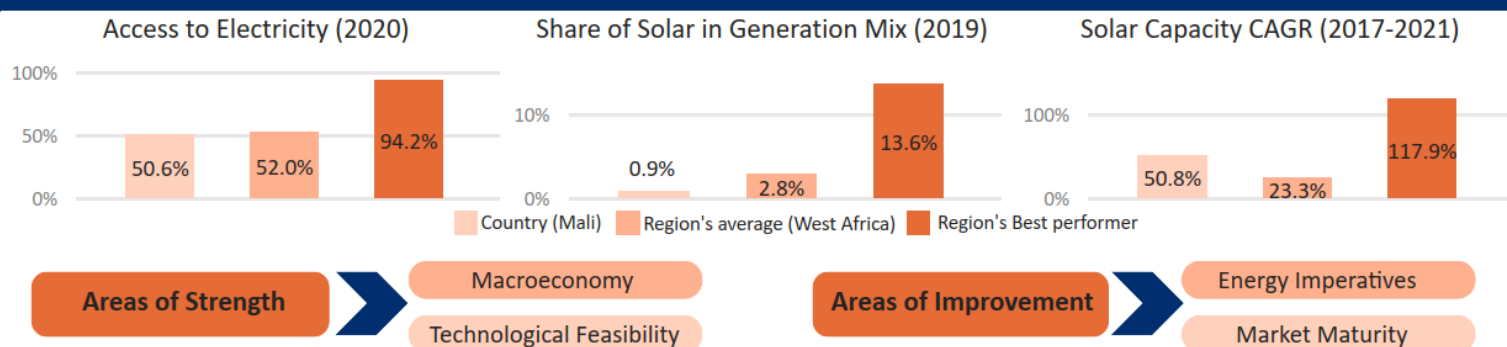


Non-Solar RE: Wind, Hydro, Biomass, Geothermal & Marine;  
 Non-RE: Coal, Natural Gas, Nuclear, Oil, etc.;  
 Other Solar: Utility Scale Solar, Rooftop etc.;  
 Data not available for other Solar RE segments;

**Support for Renewables (2020)**



## Country's regional performance and characteristics



## Key Insights

### Drivers

### Insights



Macroeconomy

- Mali is a low-income country with a GDP per capita (PPP) of USD 2,330 in 2021. <sup>1,2</sup>
- GDP (Real) grew at an annual rate of 3.1% in 2021 and it is estimated to increase by 2% in 2022. <sup>3</sup>
- Total public debt in the country increased to 52.0% of GDP in 2021 from 47.3% levels in 2020. <sup>4</sup>
- The current account deficit widened to 4.5% of GDP in 2021 from 2.3% levels in 2020. <sup>4</sup>



Policy enablers

- Ministry of Energy and Water is responsible for policy formulation, promotion, co-ordination, and monitoring of the energy sector. <sup>5</sup>
- Mali's National Energy Policy (NEP) aims to promote the widespread use of RE technologies in the country. <sup>5</sup>
- Agency for Renewable Energies (AER) is responsible to promote large-scale use of RE in Mali. <sup>6</sup>



Technological Feasibility

- Mali receives very high levels of solar irradiation of 5.9 kWh/m<sup>2</sup>/day and a specific yield of 4.7 kWh/kWp/day indicating a very strong technical feasibility for solar in the country. <sup>7</sup>
- The government of Mali plans to increase the hybridization of its minigrids by adding PV capacity to diesel power plants. <sup>8</sup>
- Mali Solar Rural Electrification Project aims to promote rural electrification through isolated solar photovoltaic (PV) minigrid systems. <sup>9</sup>



Market Maturity

- 50.6% population in Mali had access to electricity as of 2020. <sup>10</sup>
- The Electricity and Water Regulatory Commission is responsible for regulating the electricity sector in the country. <sup>5</sup>
- National Water and Electricity Utility (EDM-SA) is the state-owned electricity utility responsible for the generation, transmission and distribution of electricity. <sup>5</sup>
- Mali is a member of the West African Power Pool (WAPP) which aims to integrate the national power systems into a unified regional electricity market. <sup>11</sup>



Infrastructure

- Mali's electricity system includes an Interconnected Network (RI) which includes 150 kV, 63 kV, and 225 kV transmission lines and Isolated Centres (IC) with an installed capacity of 3.45 MW in solar. <sup>12</sup>
- EDM-SA manages 35 isolated centres equipped with diesel generators and an autonomous distribution network in Bougouni and two centers (Kadiolo and Zégoua) supplied by the MV network of Côte d'Ivoire. <sup>12</sup>



Financing

- In 2022, the AfDB approved USD 379.6 Mn Desert to Power financing facility for Mali and committed to providing technical assistance over the next seven years. <sup>13</sup>
- The Green Climate Fund approved EUR 46.2 Mn to develop 50 solar-based mini-grids to promote rural electrification in Mali. <sup>14</sup>
- The AfDB approved USD 25 Mn in Scaling Up Renewable Energy Program in Low Income Counties (SREP) funding to support Mali's projects for 20 MW solar PV Independent Power Producers (IPP) and 15 MW mini/micro hydro development. <sup>15</sup>



Energy Imperatives

- The total installed capacity in the country stood at 1,014.6 MW in 2019. <sup>16</sup>
- The total installed capacity of Solar PV witnessed a CAGR of 50.8% between 2017-2021 reaching 99.5 MW in 2021 from 19.3 MW levels in 2017. <sup>17</sup>
- In 2020, the per capita electricity consumption stood at 0.158 MWh, which is significantly lower in comparison to the global average of 3.31 MWh. <sup>18</sup>
- The price of electricity in the country was 13.6 US Cents/kWh as of 2019. <sup>19</sup>