



Malawi

Africa

Ease of doing Solar classification



Influencer

Electricity Consumption in kWh/capita (2020)

83.1

Average PVout in kWh/kWp/day (2020)

4.6

Cumulative Solar Capacity in MW (2021)

141.5

Getting Electricity Score (2020)

45.4

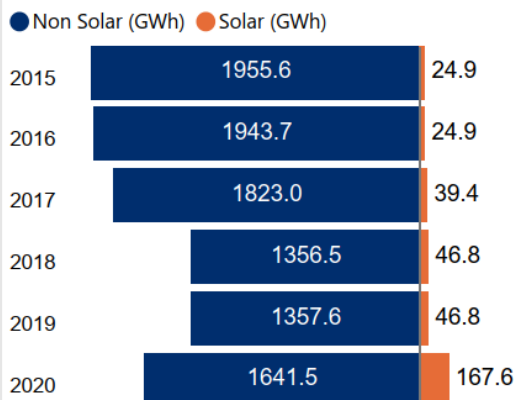
NDC Target by 2040 in %

51.0

Human Development Index (2021)

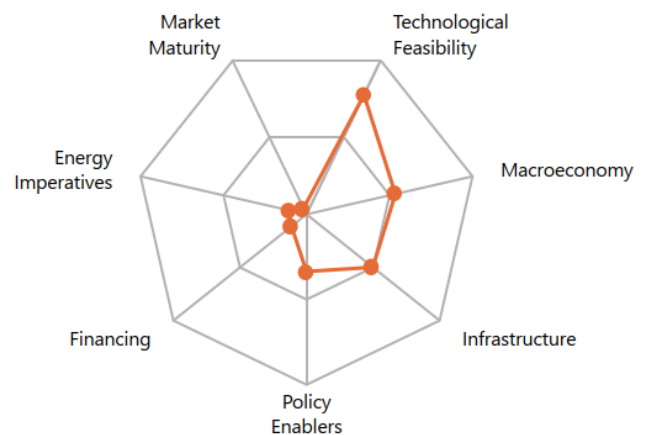
0.5

Renewable Energy Generation by Source

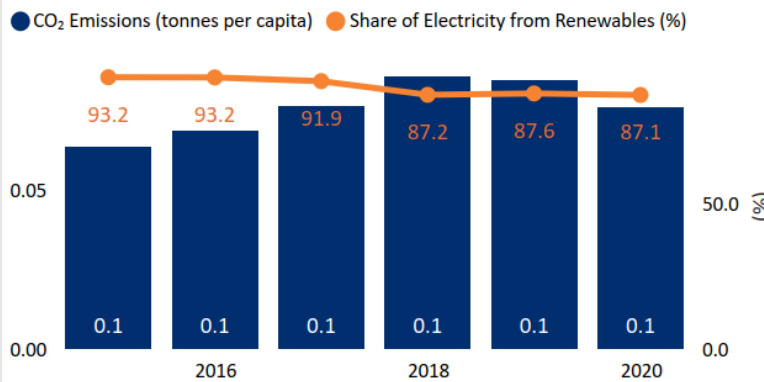


Non Solar RE includes Wind and Hydro;

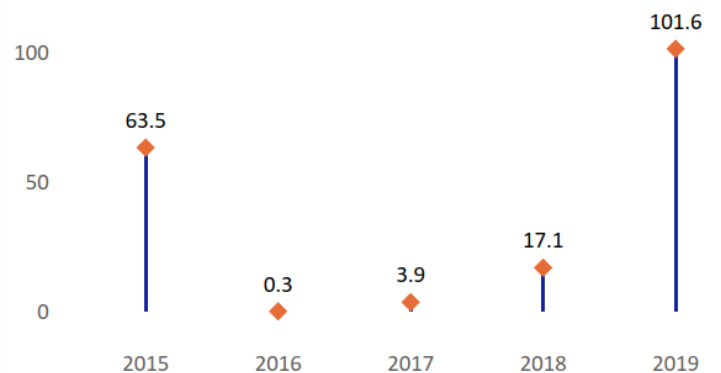
Performance against 7 Drivers



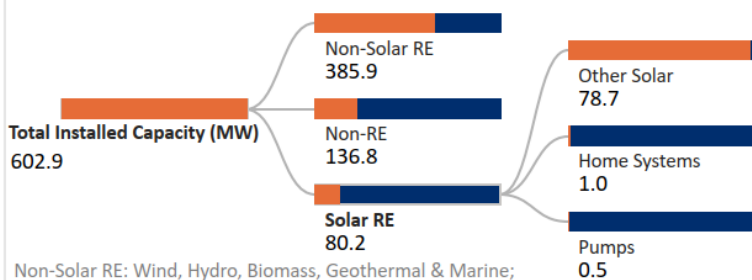
CO₂ Emissions vs Electricity share from Renewables



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?

No

Net metering/Gross metering policies and regulations?

No

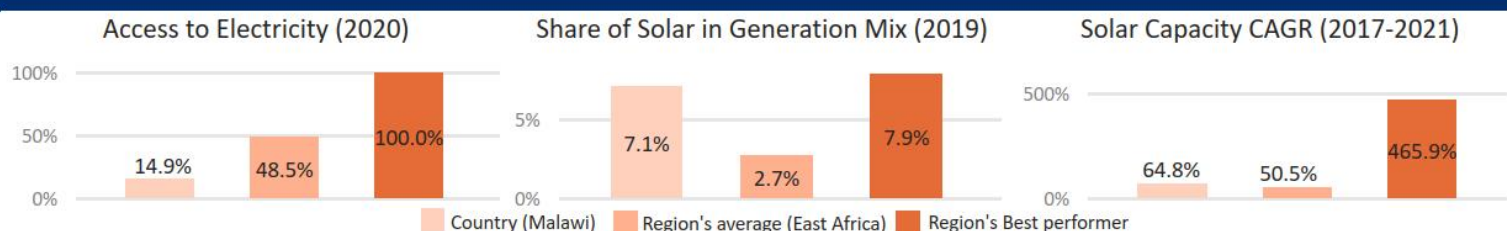
Renewable Energy Certificates?

No

Renewable Purchase Obligation?

No

Country's regional performance and characteristics



Areas of Strength

Macroeconomy
Technological Feasibility

Areas of Improvement

Energy Imperatives
Market Maturity

Key Insights

Drivers

Insights



Macroeconomy

- Malawi is a low-income country with a GDP per capita (PPP) of USD 1,638 in 2021. ^{1, 2}
- GDP (Real) grew at an annual rate of 2.2% in 2021, and it is estimated to increase by 2.7% in 2022. ³
- The inflation rate in the country increased to 9.3% in 2021 from 8.8% levels in 2020. ⁴
- The fiscal deficit stabilized at 7.4% of GDP in 2021 from 9% levels in 2020 financed by debt and grants. ⁴



Policy enablers

- The Ministry of Natural Resources, Energy and Mining is responsible for framing policies, regulations and frameworks in the energy sector. ⁵
- As per the National Energy Policy, Malawi aims to promote electricity generation from RE and encourages IPPs to carry out feasibility studies on RE. ⁶
- To promote the development of RE, mechanism such as feed-in tariff have been implemented in the country. ⁶



Technological Feasibility

- Malawi receives high levels of solar irradiation of 5.5 kWh/m²/day and a specific yield of 4.6 kWh/kWp/day indicating strong technical feasibility for solar in the country. ⁷
- Minigrids are already a focus area for development in Malawi but are still not economically feasible compared to the regional benchmarks, and thus depend on high levels of subsidy. ⁵



Market Maturity

- Only 14.9% population in Malawi had access to electricity as of 2020. ⁸
- Malawi Energy Regulatory Authority (MERA) is responsible for regulating the energy sector in a transparent, efficient, and cost-effective manner for the benefit of the consumers and operators. ⁹
- The Electricity Supply Corporation of Malawi Limited (ESCOM) is a state-owned power transmission and distribution company in Malawi. ¹⁰
- Malawi is a member of the Southern Africa Power Pool (SAPP), which aims to integrate the national power systems into a unified regional electricity market. ¹¹



Infrastructure

- The transmission line length in the country span 2,395 kms of which 1,121 km are operated at 66 kV and 1,274 km are operated at 132 kV. ¹²
- The transmission network is currently isolated from neighbouring countries, besides supplying small cross-border towns through distribution networks in Mozambique and Zambia. ¹²
- Malawi is planning to construct a HV transmission line linking Malawi to Mozambique thereby enabling the two countries' power utilities to trade power on the regional power pool. ¹²



Financing

- To ease banking system liquidity constraints during the pandemic, the Reserve Bank of Malawi implemented several measures including lowering reserve requirements and a moratorium on debt service for small and medium enterprises (SMEs) until the end of 2020. ¹³
- The banking system remains well capitalized, liquid, and profitable but non-performing loans (NPLs) have risen from 4.8% in 2019 to 6.6% in 2020. ¹³



Energy Imperatives

- In 2020, the per capita electricity consumption stood at 0.08 MWh, which is significantly lower in comparison to the global average of 3.31 MWh in 2020. ¹⁶
- The total installed capacity in the country stood at 602.9 MW in 2019. ¹⁴
- The total installed capacity of Solar PV witnessed a CAGR of 64.8% between 2017-2021 reaching 141.5 MW in 2021 from 19.2 MW levels in 2017. ¹⁵
- The price of electricity in the country was 11.5 US Cents/kWh as of 2019. ¹⁷