



Sri Lanka

Asia & Pacific

Ease of doing Solar classification



Influencer

Electricity Consumption in kWh/capita (2020)

740.8

Average PVout in kWh/kWp/day (2020)

4.2

Cumulative Solar Capacity in MW (2021)

434.2

Getting Electricity Score (2020)

74.5

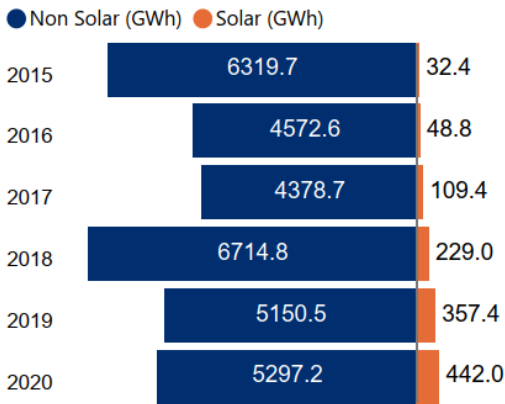
NDC Target by 2030 in %

14.5

Human Development Index (2021)

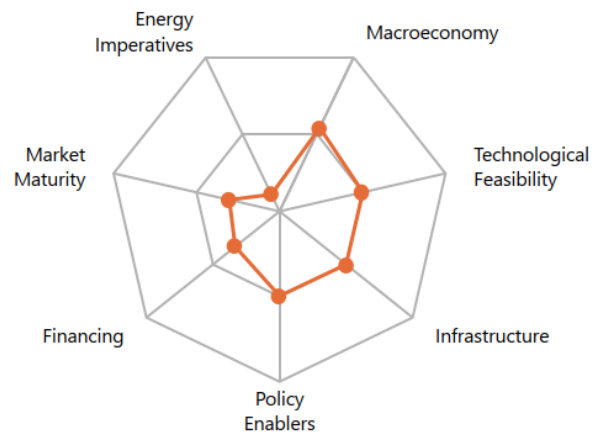
0.8

Renewable Energy Generation by Source

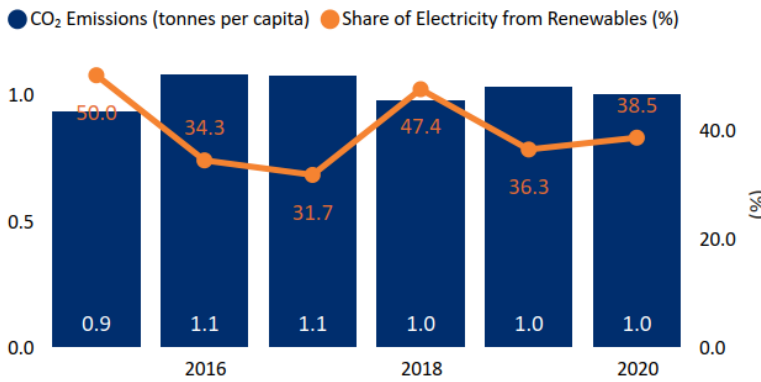


Non Solar RE includes Wind and Hydro;

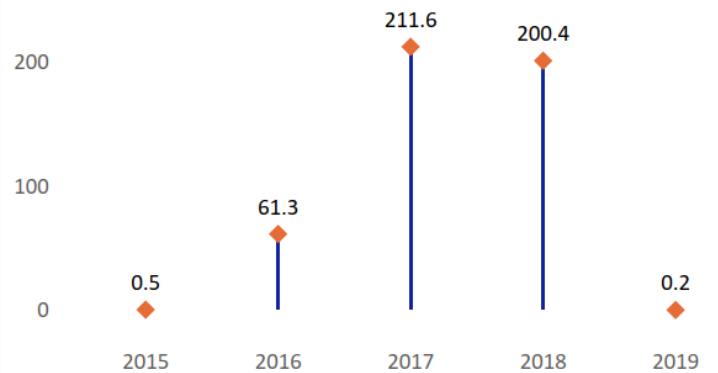
Performance against 7 Drivers



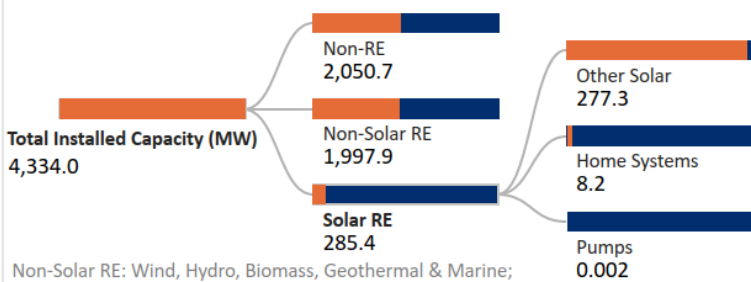
CO₂ Emissions vs Electricity share from Renewables



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?

Yes

Net metering/Gross metering policies and regulations?

Yes

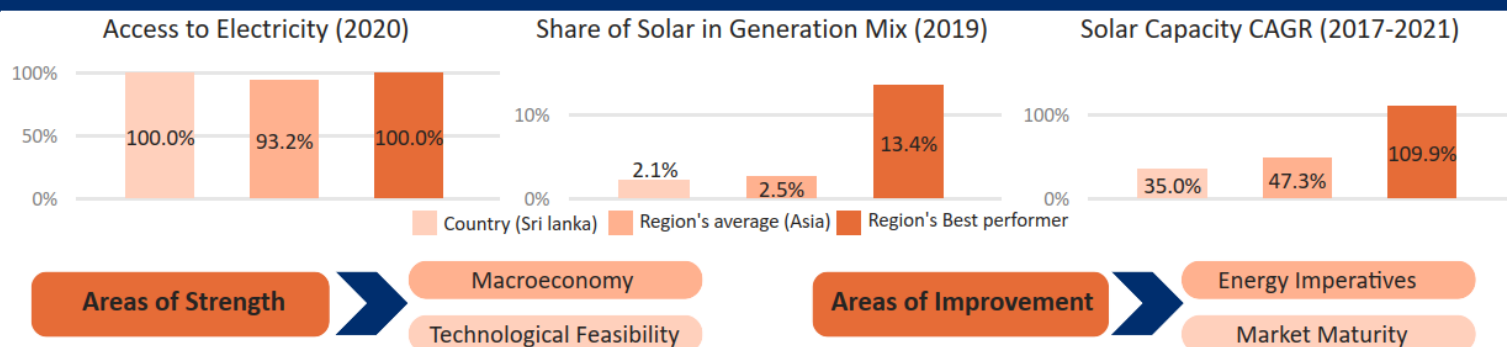
Renewable Energy Certificates?

No

Renewable Purchase Obligation?

Yes

Country's regional performance and characteristics



Key Insights

Drivers

Insights



Macroeconomy

- Sri Lanka is a lower middle-income country¹ with a GDP per capita (PPP) of USD 14,707 in 2021.²
- Due to COVID-19 Pandemic, the GDP (Real) declined by 3.5 % in 2020. However, in 2021 it has bounced back by growing at 3.3%.³
- The inflation rate (CPI) of Sri Lanka has increased to 6% in 2021 from 4.6% levels in 2020.⁴
- The general government gross debt to GDP has slightly increased to 103.1% in 2021 from 95.7% levels in 2020.⁵



Policy enablers

- Sri Lanka's energy policy has set an ambitious target of generating 70% of power from renewables by 2030.⁶
- Sri Lanka's Renewable Energy Resource Development Plan was made for 2021-2026 to implement large scale RE projects.⁷
- Net Metering mechanism in Sri Lanka has facilitated the solar business wherein consumers are encouraged for becoming prosumers.⁷
- The "Rooftop Solar PV Power Generation Project" in Sri Lanka has provided consumers with long-term debt financing for installation of rooftop solar PV systems.⁷



Technological Feasibility

- Sri Lanka receives high levels of solar irradiation (GHI) of 5.3 kWh/m²/day and specific yield 4.2 kWh/kWp/day indicating a high technical feasibility for solar in the country.⁸
- The Sri Lankan government in association with DHYBRID (a German company) has initiated a pilot project to connect stand-alone grids to ensure safe supply of renewable power.⁹
- The Ceylon Electricity Board Hybrid Power System of capacity 5 MW has a battery energy storage system of 10 MWh.¹⁰



Market Maturity

- 100% of the population in Sri Lanka had access to electricity as of 2020.¹¹
- The role of Ministry of Power, Energy and Business Development (MOPE&BD) is to improve the country's power distribution network to ensure 100% household electrification.¹²
- The Public Utilities Commission of Sri Lanka (PUCSL) is the technical and safety regulator of the electricity industry.¹³
- The Ceylon Electricity Board (CEB) is a state-owned utility which is engaged in power generation, transmission, distribution, and collection of revenue.¹⁴



Infrastructure

- Sri Lanka's transmission network is well spread across the geography and comprises of 11 kV, 33 kV, 132 kV, 220 kV lines.¹⁵
- The National Transmission & Distribution Network Development and Efficiency Improvement Project (NTDND & EIP) entails construction of 132 kV/220 kV/400 kV transmission lines and 11 kV network along with SCADA integration.¹⁶



Financing

- The ADB had sanctioned a loan of USD 200 Mn in 2017 to Ceylon Electricity Board (CEB) to finance the wind power generation project in Mannar Island.¹⁷
- The Japan International Cooperation Agency (JICA) has actively extended loan to expand the transmission network.¹⁸
- The IFC is planning for an investment of more than USD 800 Mn, specifically in supporting growth-enabling sustainable infrastructure.¹⁹



Energy Imperatives

- In 2020, the per capita electricity consumption stood at 0.74 MWh in Sri Lanka, which is lower in comparison to the global average of 3.31 MWh.²⁰
- The total installed capacity of solar PV witnessed a CAGR of 35% between 2017-2021 reaching 434.21 MW in 2021 from 130.82 MW levels in 2017.²¹
- The peak demand for electricity in the country stood at 15.21 TWh remaining same in 2021 and 2020.²²
- In 2021, the total installed capacity in the country reached 4.7 GW with a significant share coming from other fossils (36.95%), coal (26.23%), and hydro (32.22%) followed by bioenergy (1.58%), solar (0.72%) and wind (2.3%).²²