Maldives

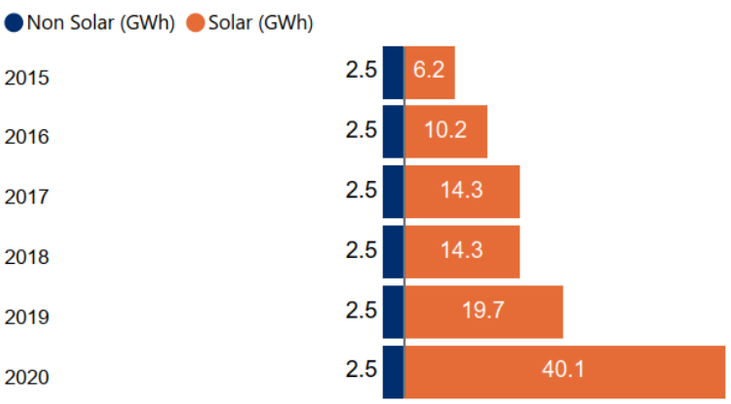
Asia & Pacific

Ease of doing Solar classification

Influencer

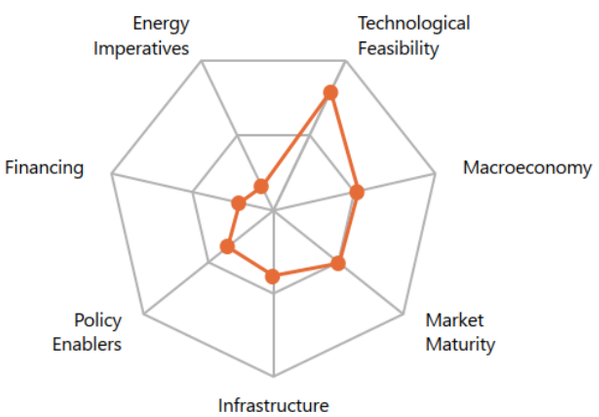
Electricity Consumption in kWh/capita (2020)	Average PVout in kWh/ kWp/day (2020)	Cumulative Solar Capacity in MW (2021)
1054.5	**4.4**	**30.8**
Getting Electricity Score (2020)	**NDC Target by 2030 in % (base year 2011)**	**Human Development Index (2021)**
55.6	**26.0**	**0.7**

Renewable Energy Generation by Source

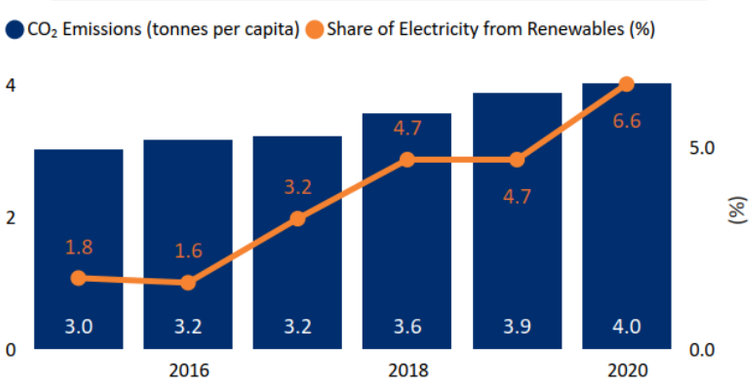


Non Solar RE includes Wind and Hydro;

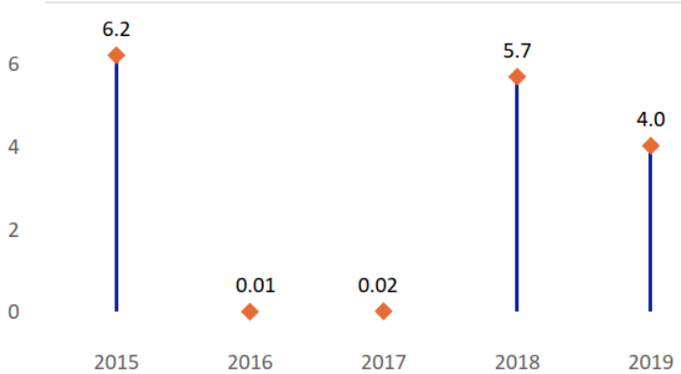
Performance against 7 Drivers



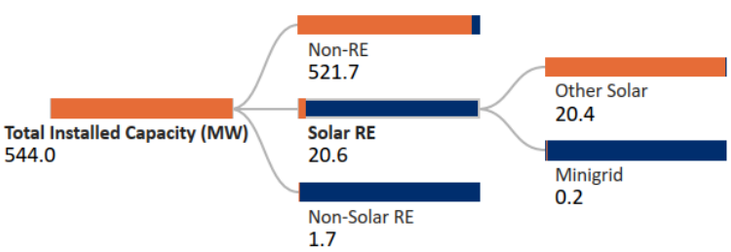
CO_2 Emissions vs Electricity share from Renewables



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.;

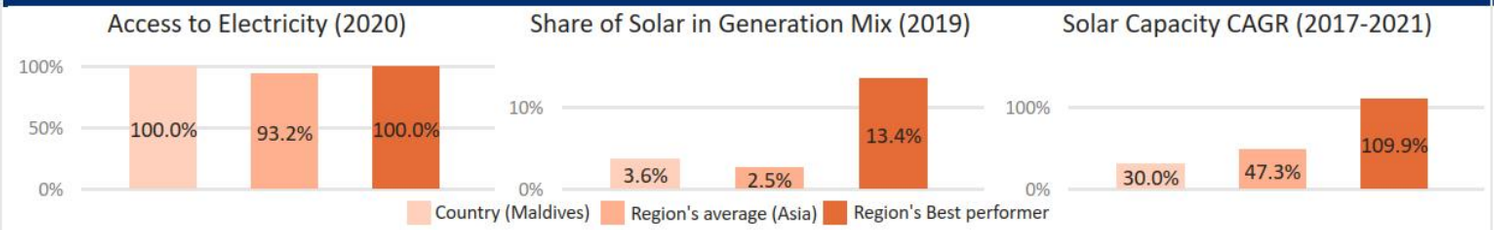
Other Solar: Utility Scale Solar, Rooftop etc.;

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

Country's regional performance and characteristics



Areas of Strength: Macroeconomy; Technological Feasibility

Areas of Improvement: Energy Imperatives; Financing

Key Insights

Drivers	Insights
Macro-economy	• Maldives is a middle-income country with a GDP per capita (PPP) of USD 20,615 in 2021. [1, 2] • Due to COVID-19 Pandemic, the GDP (Real) had declined by 33.5% in 2020. However, in 2021, the GDP has bounced back with an annual growth rate of 37%.[3] • The inflation rate (CPI) of Maldives has decreased to 0.2% in 2021 from -1.6% levels in 2020.[4] • The general government gross debt to GDP has improved to 124.8% in 2021 from 154.4 % levels in 2020.[5]
Policy enablers	• ADB has prepared a roadmap "A brighter future for Maldives Powered by Renewables, 2020-2030" for Maldives in 2020 for promoting RE in Maldives.[6] • The policy instruments supporting Maldives' vision for its energy sector are the Energy Policy and Strategy 2016 and the Strategic Action Plan (SAP) 2019–2023.[6] • Maldives has set its agenda to reduce its GHG emissions by 10% compared to business as usual by 2030 unconditionally, and by 24% under the condition of sufficient availability of financial resources and international support for technology transfer and capacity building.[6]
Technological Feasibility	• Maldives receives very high levels of solar irradiation (GHI) of 5.9 kWh/m²/day and specific yield 4.4 kWh/kWp/day indicating a very strong technical feasibility for solar in the country.[8] • Maldives in its Greater Male region has installed a solar rooftop of cumulative capacity reaching 3 MWp in the beginning of 2020.[9] • Maldives with its action plan called Preparing Outer Islands for Sustainable Energy Development (POISED) has conceptualised a hybrid system (Diesel generator, Solar PV, Energy Storage) resulting in an average fuel saving of 25%.[9] • Maldives has floated a tender of 40 MWh for Battery Energy Storage System across its 19 islands/cities.[10]
Market Maturity	• 100% of the population in Maldives is having access to electricity since 2020.[11] • The Energy (electricity licensing) regulations 2012 regulates generation, transmission, and distribution in Maldives. [12] • The Maldives Renewable Energy Fund is positioned to channel sustainable investments into the country.[13]
Infrastructure	• Maldives' first HV power grid operating at 132 kV covers the Male Island ring network consisting of three 132 kV sub-stations on the Maldives' capital, Male Island, Hulhumale Island, and Hulhum Airport Island.[14] • India and Maldives plan to set up a transmission interconnection for transfer of renewable power between the two countries.[15] • Maldives has issued a grid upgradation tender for integration of Distributed Solar PV at 11 kV.[16]
Financing	• World Bank with its Accelerating Sustainable Private Investments in Renewable Energy (ASPIRE) has funded USD 107.4 Mn to bring in private investments for increasing RE capacity in Maldives.[17] • The Asian Development Bank (ADB) has approved a USD 7.74 Mn concessional loan and a USD 2.73 Mn project grant to scale up the ongoing project for Preparing Outer Islands for Sustainable Energy Development (POISED).[18] • The Asia Infrastructure Investment Bank (AIIB) has played a major role in Maldives by investing in solar PV, BESS and in grid upgradation.[19]
Energy Imperatives	• In 2020, Maldives per capita electricity consumption stood at 1.05 MWh, which is significantly lower in comparison to the global average of 3.31 MWh.[20] • The demand for electricity in 2021 in the country stood at 0.57 TWh remaining the same as the previous year's demand.[22] • In 2021, the total installed capacity in the country stood at 319.5 GW. [26,22]