Maldives
Asia & Pacific

Ease of doing Solar classification
Influencer

Electricity Consumption in kWh/capita (2020)
1054.5

Average PVout in kWh/kwp/day (2020)
4.4

Cumulative Solar Capacity in MW (2021)
30.8

Getting Electricity Score (2020)
55.6

NDC Target by 2030 in % (base year 2011)
26.0

Human Development Index (2021)
0.7

Renewable Energy Generation by Source

Performance against 7 Drivers

Energy Imperatives
Technological Feasibility
Financing
Policy Enablers
Infrastructure
Market Maturity
Macroeconomy

CO₂ Emissions vs Electricity share from Renewables

International Finance received for Clean Energy (Million US Dollars)

5.7

6.2

4.0

Support for Renewables (2020)

Feed-in-Tariffs for renewable energy supply to the grid?
Yes

Net metering/Gross metering policies and regulations?
No

Renewable Energy Certificates?
No

Renewable Purchase Obligation?
No
Country’s regional performance and characteristics


| 100.0% | 100.0% | 3.6% |
| 93.2% | 13.4% | 2.5% |
| 0% | 100% | 0% |
| Country (Maldives) | Region’s average (Asia) | Region’s Best performer |

Areas of Strength → Macroeconomy → Technological Feasibility

Areas of Improvement → Energy Imperatives → Financing

Key Insights

Drivers | Insights

- **Macroeconomy**
  - Maldives is a middle-income country with a GDP per capita (PPP) of USD 20,615 in 2021.  
  - 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%.  
  - The inflation rate (CPI) of Maldives has decreased to 0.2% in 2021 from -1.6% levels in 2020.  
  - The general government gross debt to GDP has improved to 124.8% in 2021 from 154.4% levels in 2020.

- **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.
  - 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.

- **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.
  - Maldives in its Greater Male region has installed a solar rooftop of cumulative capacity reaching 3 MWp in the beginning of 2020.
  - 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%.
  - Maldives has floated a tender of 40 MWp for Battery Energy Storage System across its 19 islands/cities.

- **Market Maturity**
  - 100% of the population in Maldives is having access to electricity since 2020.
  - The Energy (electricity licensing) regulations 2012 regulates generation, transmission, and distribution in Maldives.
  - The Maldives Renewable Energy Fund is positioned to channel sustainable investments into the country.

- **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.
  - India and Maldives plan to set up a transmission interconnection for transfer of renewable power between the two countries.
  - Maldives has issued a grid upgradeation tender for integration of Distributed Solar PV at 11 kV.

- **Financing**
  - World Bank with its Accelerating Sustainable Private Investments in Renewable Energy (ASPIRE) has funded USD 107.4 M to bring in private investments for increasing RE capacity in Maldives.
  - The Asian Development Bank (ADB) has approved a USD 7.74 M concessional loan and a USD 2.73 M project grant to scale up the ongoing project for Preparing Outer Islands for Sustainable Energy Development (POISED).
  - The Asia Infrastructure Investment Bank (AIIB) has played a major role in Maldives by investing in solar PV, BESS and in grid upgradeation.

- **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.
  - The demand for electricity in 2021 in the country stood at 0.57 TWh remaining the same as the previous year’s demand.
  - In 2021, the total installed capacity in the country stood at 319.5 GW.