



Marshall islands

Asia & Pacific

Ease of doing Solar classification



Progressive

Electricity Consumption
in kWh/capita (2020)

Not available

Average PVout in kWh/
kWp/day (2020)

4.2

Cumulative Solar Capacity in MW
(2021)

1.6

Getting Electricity Score (2020)

59.4

NDC Target by 2030 in %
(base year 2010)

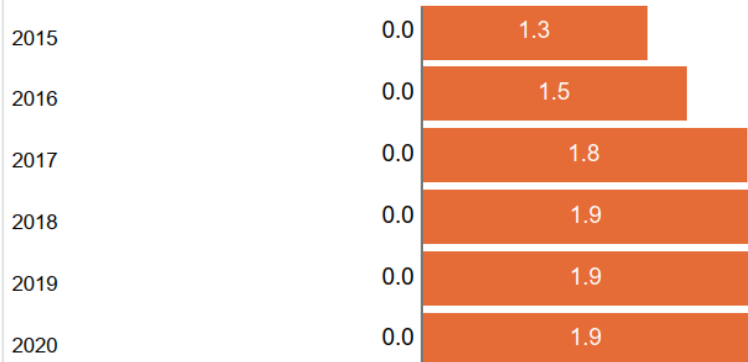
40.0

Human Development Index (2021)

0.6

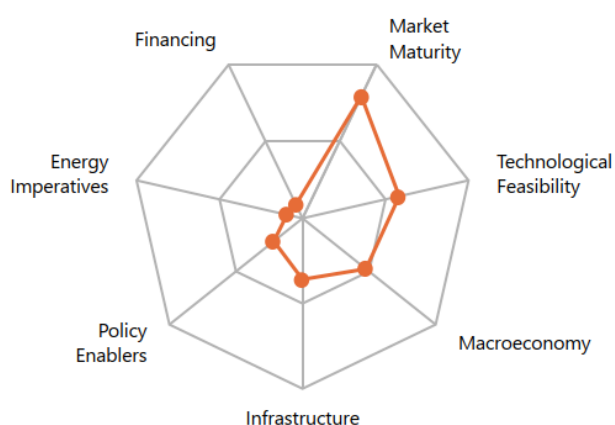
Renewable Energy Generation by Source

● Non Solar (GWh) ● Solar (GWh)



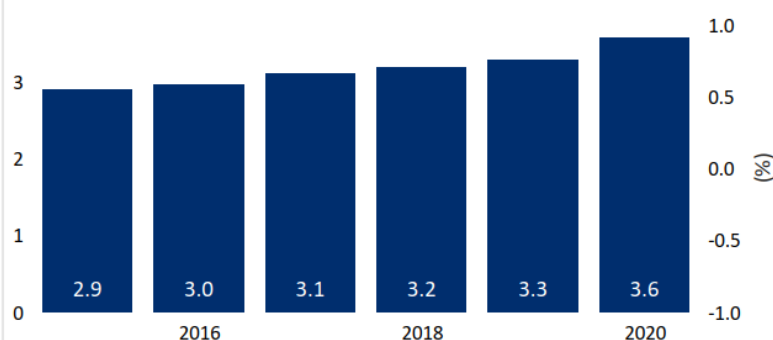
Non Solar RE includes Wind and Hydro;

Performance against 7 Drivers



CO₂ Emissions vs Electricity share from Renewables

● CO₂ Emissions (tonnes per capita) ● Share of Electricity from Renewables (%)



Fiscal Incentives & Public Financing for Renewables (2020)

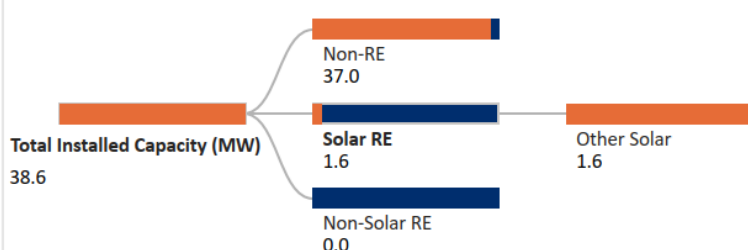
Investment or production tax credits?

No

Public investment, loans, grants, capital subsidies or rebates?

No

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

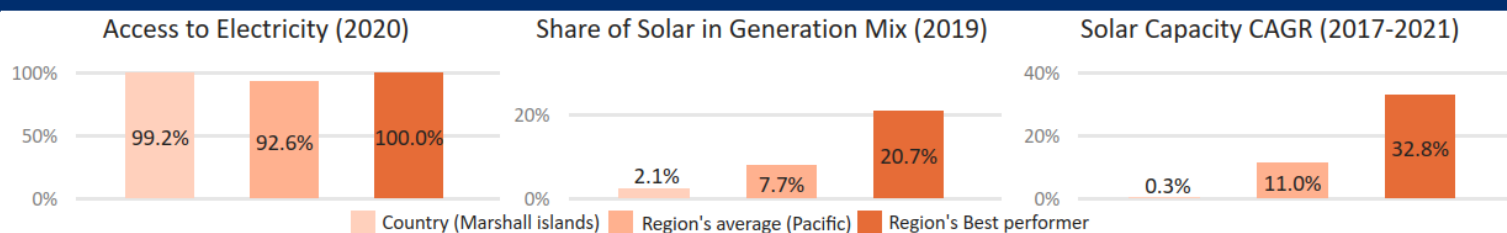
Renewable Energy Certificates?

No

Renewable Purchase Obligation?

No

Country's regional performance and characteristics



Areas of Strength

Market Maturity
Technological Feasibility

Areas of Improvement

Energy Imperatives
Financing

Key Insights

Drivers

Insights



Macro-economy

- Marshall Island is an upper middle-income country with a GDP per capita (PPP) of USD 6,550 in 2021.^{1, 2}
- Due to COVID-19 Pandemic, the GDP (Real) had declined by 1.6% in 2020. However, in 2021, the GDP has bounced back with an annual growth rate of 1.7%.³
- The inflation rate (CPI) of Marshall Island has increased to 2.6% in 2021 from -0.7% levels in 2020.⁴
- The general government gross debt to GDP has decreased to 19.8% in 2021 from 21.6% levels in 2020.⁵



Policy enablers

- Marshall Islands government in its NDCs has committed to reduce GHG emission and achieve net zero emissions by 2050.⁶
- Republic of Marshall Island (RMI) has targeted to achieve 100% renewable energy generation by 2050.⁷
- Marshall Island in its National Review Document, 2021 has prepared a roadmap to extend availability, affordability, and accessibility of electricity in accordance with SDG goal 7.⁸
- The World Bank through its Sustainable Energy Development Project has supported Marshalls Energy Company (MEC) to increase the share of RE in the generation mix, to improve EE and to enhance reliability of supply.⁹



Technological Feasibility

- RMI receives high levels of solar irradiation (GHI) of 5.4 kWh/m²/day and specific yield of 4.2 kWh/kWp/day, indicating a strong technical feasibility for solar in the country.¹⁰
- RMI, with distribution and installations of more than 3,100 Solar Home Systems in the rural communities, has increased its rate of extending clean energy to 100%.⁸
- RMI on its Meck Island has developed a microgrid with 2.4 MW solar photovoltaic (PV) system and a 2 MW/3 MWh Li-ion BESS.¹¹



Market Maturity

- 99.2% of the population in Marshall Islands had access to electricity as of 2020.¹²
- Kwajalein Atoll Joint Utility Resources (KAJUR) supplies 34% of the population from its grid network in Ebeye.¹³



Infrastructure

- MEC has three ways of supplying electricity through the main grid in Majuro, through off-grid SHS and mini-grid in the rest Island.¹²
- MEC's PV grid capacity includes 209 kW system supported by Japan International Cooperation Agency (JICA) and 600 kW system supported by the International Renewable Energy Agency (IRENA) and about 3,000 units that is 200 W of SHS supported by EU.¹³
- MEC operates at 13.8 kV, 4.16 kV and low voltage.¹³
- KAJUR has 600 kW of PV plants supported by JICA operating at 13.8 kV.¹³



Financing

- Green Climate Fund covering Small Island Developing States (SIDS) includes RMI with a total investment of USD 55.5 Mn.¹⁴
- The Asian Development Bank (ADB) and RMI have an agreement for a USD 7 Mn grant to support the Marshalls Energy Company (MEC) in improving its energy network and to shift towards renewables.¹⁵
- The World Bank has extended an investment of USD 34 Mn for promoting renewable power generation in the country.¹⁶



Energy Imperatives

- The total installed capacity of Solar PV witnessed a CAGR of 0.3% between 2017-2021, increasing to 1.63 MW from 1.61 between the years.¹⁸
- Per capita renewable capacity is 27.5 Watt/person in the country.¹⁹