



Vanuatu

Asia & Pacific

Ease of doing Solar classification



Progressive

Electricity Consumption in kWh/capita (2020)

227.9

Average PVout in kWh/kWp/day (2020)

3.5

Cumulative Solar Capacity in MW (2021)

4.4

Getting Electricity Score (2020)

72.2

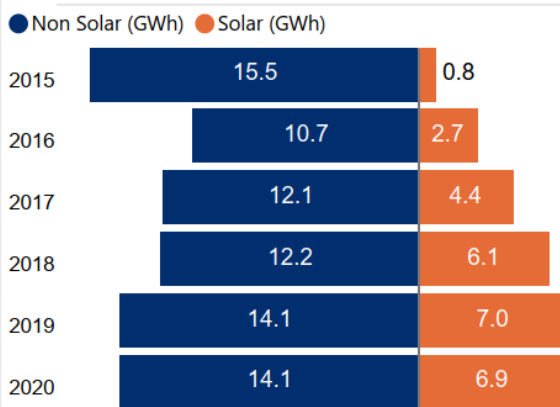
NDC Target by 2030 in % (base year 2005)

Not available

Human Development Index (2021)

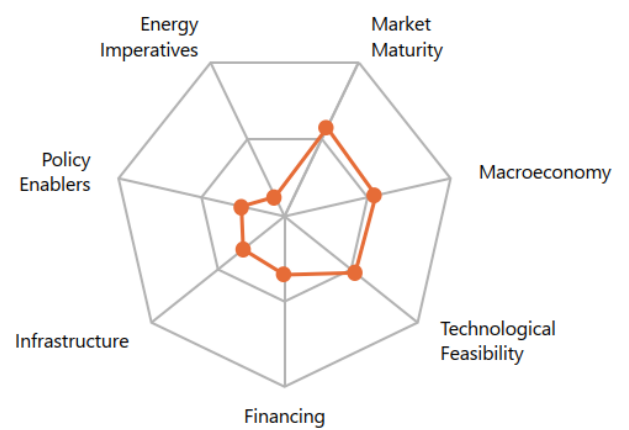
0.6

Renewable Energy Generation by Source

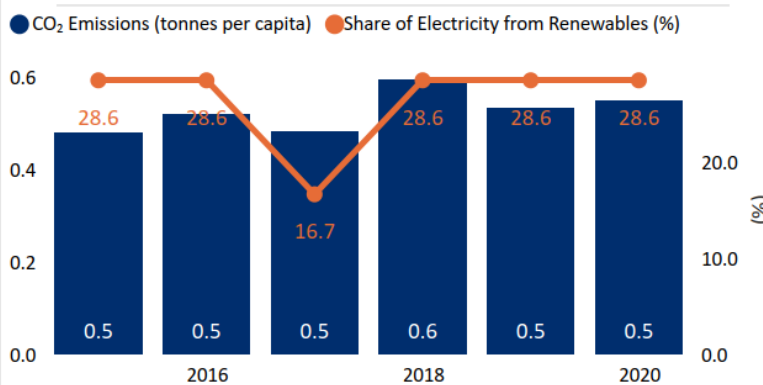


Non Solar RE includes Wind and Hydro;

Performance against 7 Drivers



CO₂ Emissions vs Electricity share from Renewables

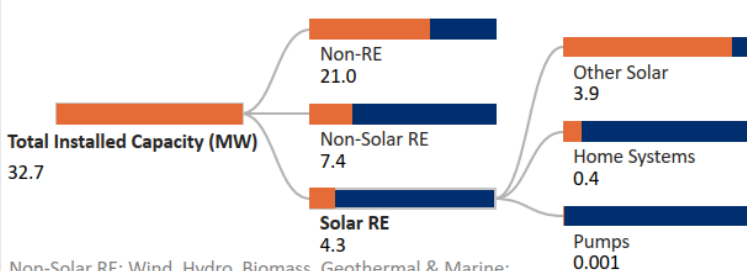


Fiscal Incentives & Public Financing for Renewables (2020)

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)

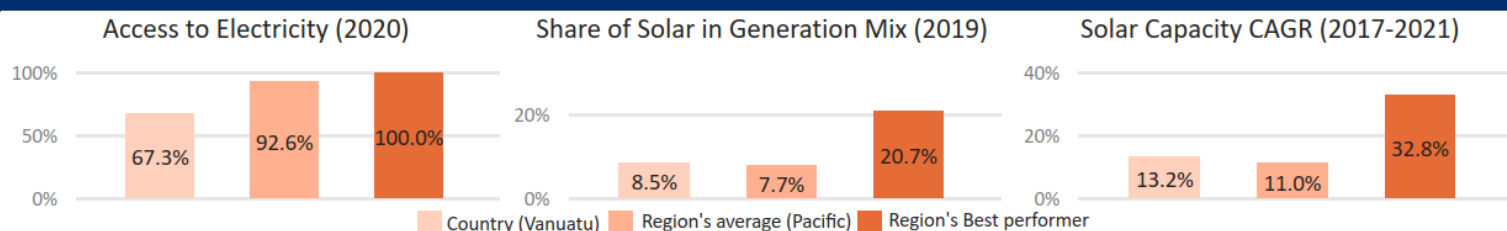
Feed-in-Tariffs for renewable energy supply to the grid?
Yes

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
Market Maturity

Areas of Improvement

Energy Imperatives
Policy Enablers

Key Insights

Drivers

Insights



Macroeconomy

- Vanuatu is a lower middle-income¹ country with a GDP per capita (PPP) of USD 3,057 in 2021.²
- Due to COVID-19 Pandemic, the GDP (Real) had declined by 5.4% in 2020. However, in 2021, the GDP has bounced back by growing rate at 0.4%.³
- The inflation rate (CPI) of Vanuatu has decreased to 2.3% in 2021 from 5.3% levels in 2020.⁴
- The general government gross debt to GDP has marginally increased to 48.2% in 2021 from 47.5% levels in 2020.⁵



Policy enablers

- Vanuatu National Energy Road Map (2016-30) envisions to have affordable, secure, accessible, high quality, clean energy services.⁶
- Vanuatu has launched an ambitious climate policy with a commitment of achieving 100% RE share in electricity generation by 2030.⁷
- Vanuatu has targeted to install 10 MW grid connected solar PV by 2025 and additional 10 MW grid connected solar by 2030.⁸



Technological Feasibility

- Vanuatu receives moderate levels of solar irradiation (GHI) of 4.3 kWh/m²/day and specific yield 3.5 kWh/kWp/day indicating a moderate technical feasibility for solar in the country.⁹
- Vanuatu's Department of Energy has set up a solar mini grid that caters to the electricity demand of almost 2,800 people in a remote island of Malekula.¹⁰
- National Advisory Board (Government of Vanuatu) has proposed an RE project with BESS (capacity of 11.5 MW/6.75 MWh) under PPP model on Efate Island.¹¹



Market Maturity

- 67.3% of the population in Vanuatu had access to electricity as of 2020.¹²
- The power sector in Vanuatu is regulated by Utilities Regulatory Authority (URA). UNELCO and VIU are the utilities operating in the country through Electricity Concession Contracts.¹³
- Nationally Appropriate Mitigation Action (NAMA) has extended its support to Vanuatu in achieving 100% access to electricity to all by 2030.¹⁴



Infrastructure

- Vanuatu's transmission lines comprises of Malekula transmission line of 20 kV and low voltage lines of 400 V for distribution grids.¹⁵
- The Government of Vanuatu has increased its energy access to households through expansion of existing distribution grids and development of low-cost RE.¹⁵



Financing

- In 2021, the Asian Development Bank (ADB) and Government of Vanuatu announced to provide USD 6 Mn and USD 1.2 Mn grant respectively towards development of RE.¹⁶
- In 2017, the World Bank had approved USD 4 Mn to provide electricity to 45,000 people in Vanuatu through RE sources.¹⁷
- In 2021, the Climate Investment Funds (CIF) invested in Vanuatu through its Scaling up Renewable Energy Program (SREP) with an amount of USD 14 Mn.¹⁸



Energy Imperatives

- In 2020, the per capita electricity consumption stood at 0.23 MWh, which is lower in comparison to the global average of 3.31 MWh.¹⁹
- The total installed capacity of Solar PV witnessed a CAGR of 13.2% reaching 4.4 MW in 2021 from 2.7 MW levels in 2017.²⁰
- The peak demand for electricity in the country is 0.07 TWh remaining same in 2021 and 2020.²¹
- In 2021, the total installed capacity in the country stood at 32 MW with maximum share coming from fossil fuel based (71.43%) followed by bioenergy (14.29%) and solar (~15%).^{21,22}