



# Barbados

Latin America & Caribbean

## Ease of doing Solar classification



### Achiever

Electricity Consumption in kWh/capita (2020)

# 3375.4

Average PVout in kWh/kWp/day (2020)

# 4.7

Cumulative Solar Capacity in MW (2021)

# 50.0

Getting Electricity Score (2020)

# 66.2

NDC Target by 2030 in %

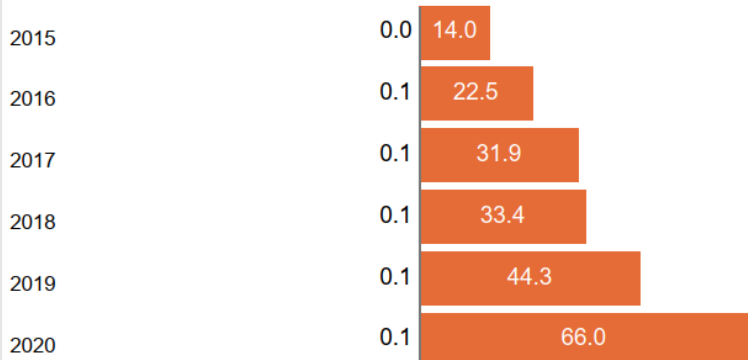
# 70.0

Human Development Index (2021)

# 0.8

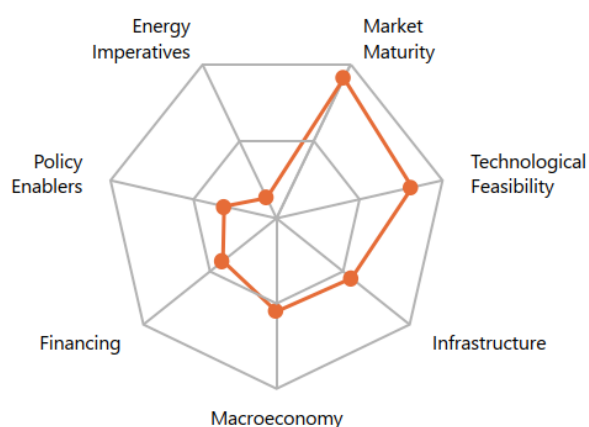
## Renewable Energy Generation by Source

● Non Solar (GWh) ● Solar (GWh)



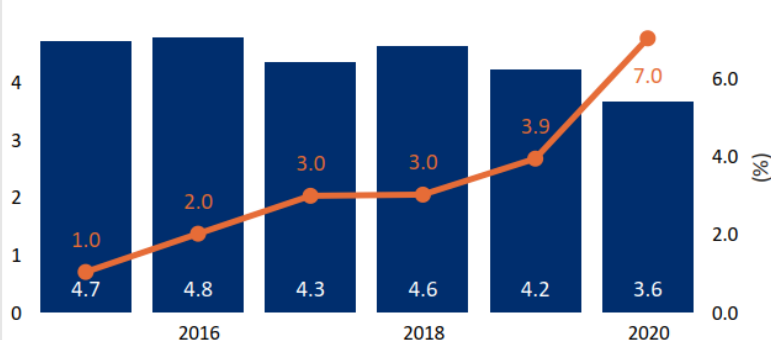
Non Solar RE includes Wind and Hydro;

## Performance against 7 Drivers



## CO<sub>2</sub> Emissions vs Electricity share from Renewables

● CO<sub>2</sub> Emissions (tonnes per capita) ● Share of Electricity from Renewables (%)



## Fiscal Incentives & Public Financing for Renewables (2020)

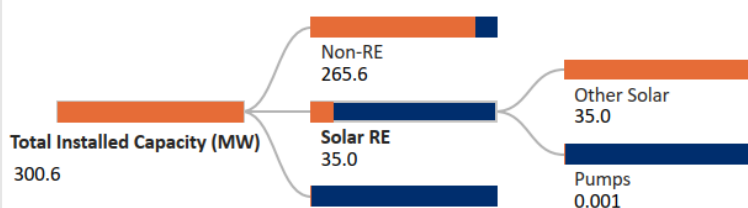
Investment or production tax credits?

# No

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

# Yes

## 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?

# Yes

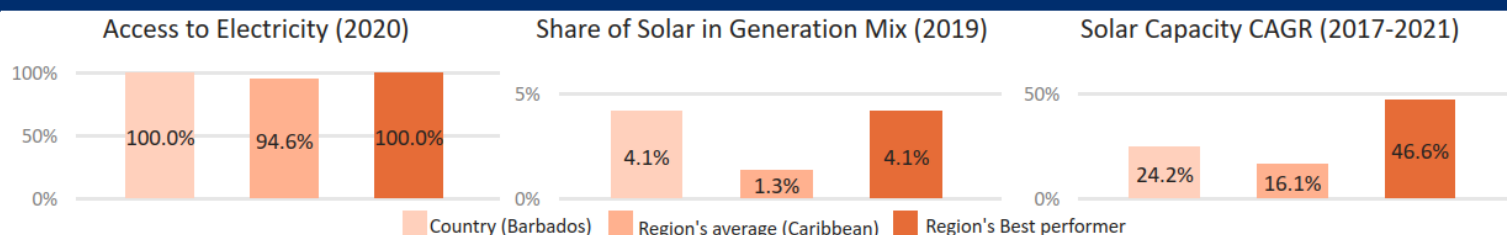
Renewable Energy Certificates?

# No

Renewable Purchase Obligation?

# No

## Country's regional performance and characteristics



### Areas of Strength

Market Maturity  
Technological Feasibility

### Areas of Improvement

Energy Imperatives  
Policy Enablers

## Key Insights

### Drivers

### Insights



Macro-economy

- Barbados is a high-income country with a GDP per capita (PPP) of USD 15,111 in 2021.<sup>1,4</sup>
- Due to COVID-19 Pandemic, the GDP (Real) contracted by 13.7% in 2020. However, in 2021 it has bounced back growing at a rate of 0.7%.<sup>1</sup>
- The inflation rate (CPI) of the country has increased to 3.1% in 2021 from 2.9% levels in 2020.<sup>1</sup>
- The general government gross debt to GDP has reduced to 135.4% in 2021 from 147.0% levels in 2020.<sup>1</sup>



Policy enablers

- By 2030, the country aims to achieve a 100% share of RE in the electricity generation mix.<sup>9</sup>
- To promote the development of RE in the country several incentives- such as tax credits, tax exemptions/reductions, availability of interconnections standards and net metering- have been implemented in the country.<sup>6</sup>



Technological Feasibility

- Barbados receives high levels of solar irradiation (GHI) of 5.8 kWh/m<sup>2</sup>/day and a specific yield 4.7 kWh/kWp/day indicating very strong technical feasibility for solar in the country.<sup>3</sup>
- In 2021, 4.12% of the country's power demand was met through RE sources.



Market Maturity

- 100% of the population in Barbados had access to electricity as of 2020.<sup>2</sup>
- Utility Regulation Department, Fair Trading Commission is the designated agency that regulates the energy sector in the country.<sup>6</sup>
- The Barbados Light and Power Company (BL&P) is responsible for generation, transmission, and distribution of electricity in the country.<sup>6</sup>



Infrastructure

- The country has reported T&D losses of 5% in 2018 indicating an efficient power infrastructure.<sup>9</sup>
- The power infrastructure in the country operates at voltages ranging from 115 V to 69 kV with transmission and distribution lines spanning more than 150 kms and 2,800 kms respectively.<sup>10</sup>



Financing

- Backed by Inter-American Development Bank (IADB), the USD 45 Mn Sustainable Energy Investment Programme (Energy Smart Fund 2) aims to provide funding and technical support to the RE projects in the country.<sup>8</sup>
- As per the country's National Energy policy (2019-30), the government aims to develop international financing and assistance program to catalyse the growth of RE in the country.<sup>7</sup>



Energy Imperatives

- In 2020, the per capita electricity consumption stood at 3.38 MWh which is slightly higher in comparison to the global average of 3.31 MWh.<sup>4</sup>
- The total installed capacity of solar PV witnessed a CAGR of 24.2% reaching 50 MW in 2021 from 21 MW levels in 2017.<sup>4</sup>
- The peak demand for electricity in the country has remained constant at 0.92 TWh in 2021 and 2020.<sup>4</sup>
- In 2021, the total installed capacity in the country stood at 0.32 GW with a significant share coming from oil (84.4%) followed by solar (15.6%).<sup>4</sup>