



Bolivia

Latin America & Caribbean

Ease of doing Solar classification



Influencer

Electricity Consumption
in kWh/capita (2020)

825.0

Average PVout in kWh/kWp/day
(2020)

4.9

Cumulative Solar Capacity in MW
(2021)

170.3

Getting Electricity Score (2020)

73.2

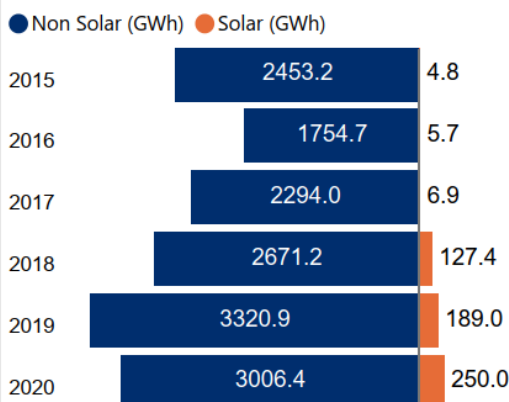
NDC Target by 2030 in %
(base year 2005)

Not available

Human Development Index (2021)

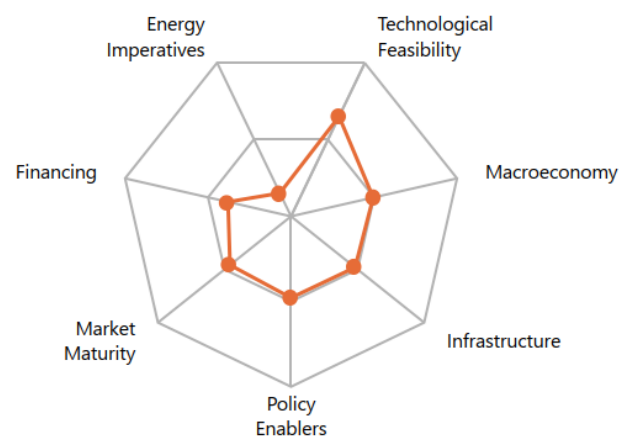
0.7

Renewable Energy Generation by Source

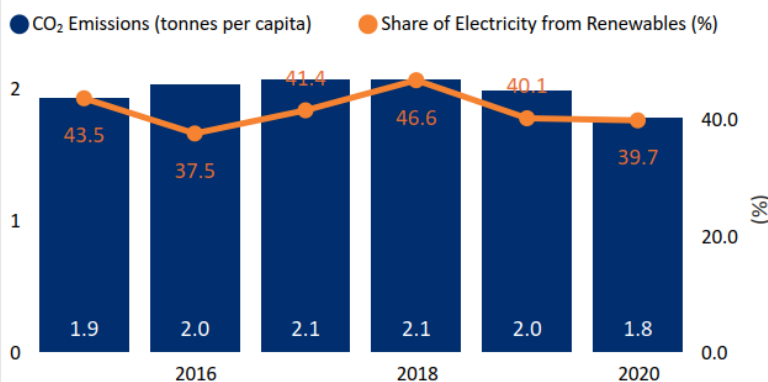


Non Solar RE includes Wind and Hydro;

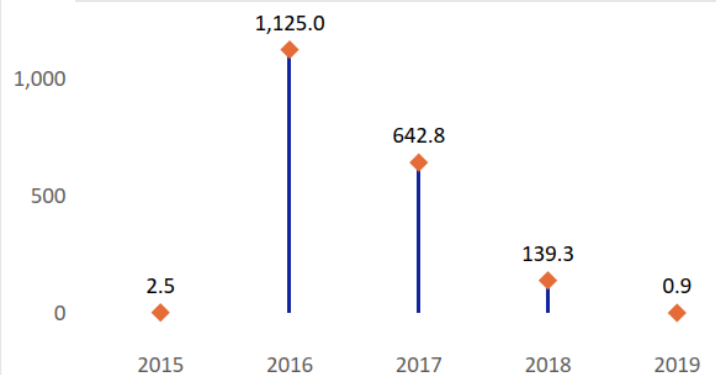
Performance against 7 Drivers



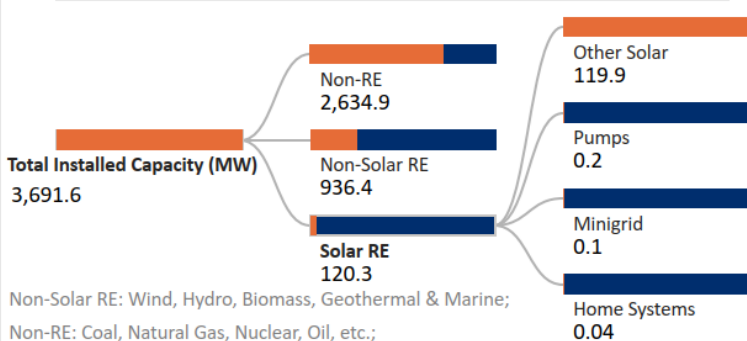
CO₂ Emissions vs Electricity share from Renewables



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?

Yes

Net metering/Gross metering policies and regulations?

Yes

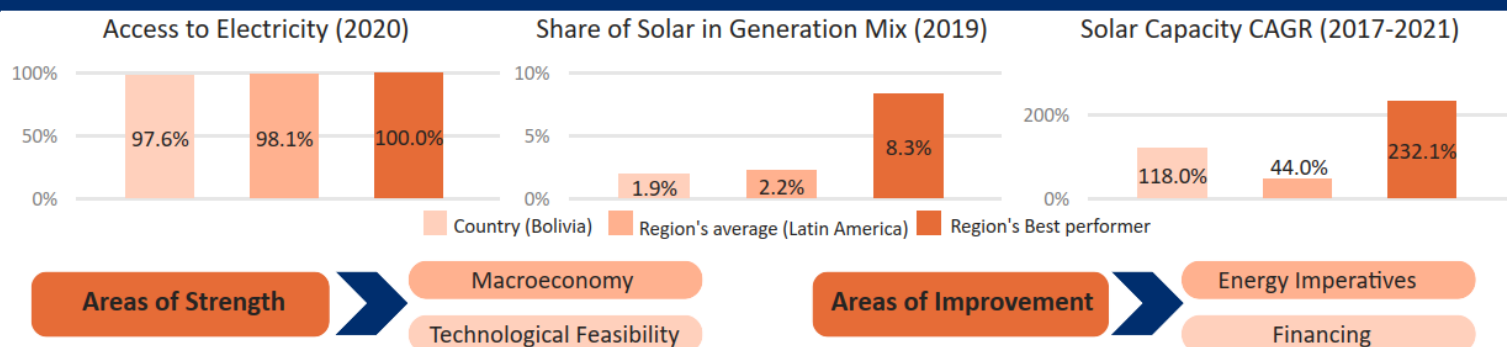
Renewable Energy Certificates?

No

Renewable Purchase Obligation?

Yes

Country's regional performance and characteristics



Key Insights

Drivers

Insights



Macroeconomy

- Bolivia is a lower-middle income country¹ with a GDP per capita (PPP) of USD 8,846 in 2021.²
- Due to COVID-19 Pandemic, the GDP (Real) had declined by 8.7% in 2020. However, in 2021 it has bounced back recording an annual growth rate of 6.1%.³
- The inflation rate (CPI) of Bolivia has decreased to 0.7% in 2021 from 0.9% levels in 2020.⁴
- The general government gross debt to GDP has marginally increased to 80.5% in 2021 from 78% levels in 2020.⁵



Policy enablers

- Bolivia has set a target to achieve 183 MW through RE sources by 2025.⁶
- In March 2021, the Bolivian government introduced a net metering scheme for rooftop PV.⁶
- Bolivia has set a target to set up 8 isolated hybrid systems with RE sources in its power system by 2030.⁷
- As per NDC (2021-2030), Bolivia has set a target to attain an annual growth of 10% in the share of electric vehicles in the Bolivian public transportation by 2030.⁷



Technological Feasibility

- Bolivia receives high solar irradiation (GHI) of 5.4 kWh/m²/day and specific yield 4.9 kWh/kWp/day indicating a high technical feasibility for solar in the country.⁸
- Bolivia has planned to make the country a global battery industrial hotspot.⁹
- In Feb 2021, Bolivia connected 100 MW Oruro Solar Plant to its main grid, a major step towards clean energy future.¹⁰
- Bolivia with the assistance of the World Bank has lightened up its rural area through solar power lights.¹¹



Market Maturity

- 97.6% of the population in Bolivia had access to electricity as of 2020.¹²
- Electricity Law defines the principles, institutional organisation, operational structure, and economic model of the electricity sector in Bolivia.¹³
- Bolivia's National Electricity Company (Empresa Nacional de Electricidad)-ENDE controls majority of the power sector in the country having 80% share in Generation & Transmission and 51% share in Distribution sector.¹⁴



Infrastructure

- Bolivia has a transmission system comprising of lines operating at 69 kV, 115 kV, 230 kV.¹⁵
- Bolivia has seven existing distribution companies having monopoly in operating areas.¹⁶
- Bolivia has two transmission companies Transportadora de Electricidad (TDE), and ISA Bolivia that are responsible for operation and maintenance of the network.¹⁶
- Bolivia has connected all major cities to main national grid except Tarija and Trinidad while transmission line for Tarija is under construction.¹⁶



Financing

- CAF, Development Bank of Latin America has extended fund to all energy efficient and RE projects in Bolivia.¹⁷
- In 2018, Inter-American Development Bank (IDB) had approved USD 51.6 Mn loan to boost electricity sector in Bolivia.¹⁸
- The Green Climate Fund (GCF) has approved a funding of USD 1.1 Mn towards clean energy.¹⁹



Energy Imperatives

- In 2020, the per capita electricity consumption of 0.825 MWh in Bolivia is significantly lower in comparison to the global average of 3.31 MWh.²⁰
- The total installed capacity of solar PV witnessed a CAGR of 118.0% reaching 170.33 MW in 2021 from 7.54 MW levels in 2017.²¹
- In 2021, the total installed capacity in the country stood at 3.58 GW²² with a significant share coming from gas (68.65%) followed by hydro (20.47%), solar (4.6%), wind (3.56%), biofuels (1.7%), biogas (0.14%), oil (0.88%).²²