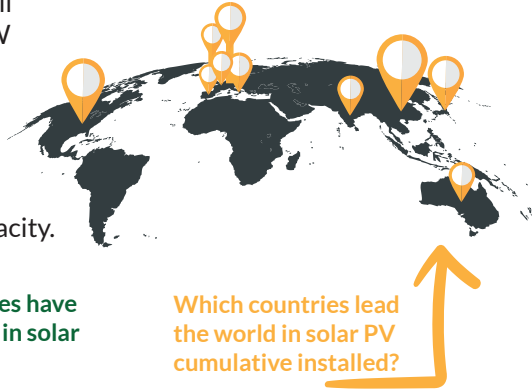




Global PV Market Status

In 2018, Brazil added 1,2 GW in solar PV capacity, totaling 2,4 GW of cumulative installed capacity.



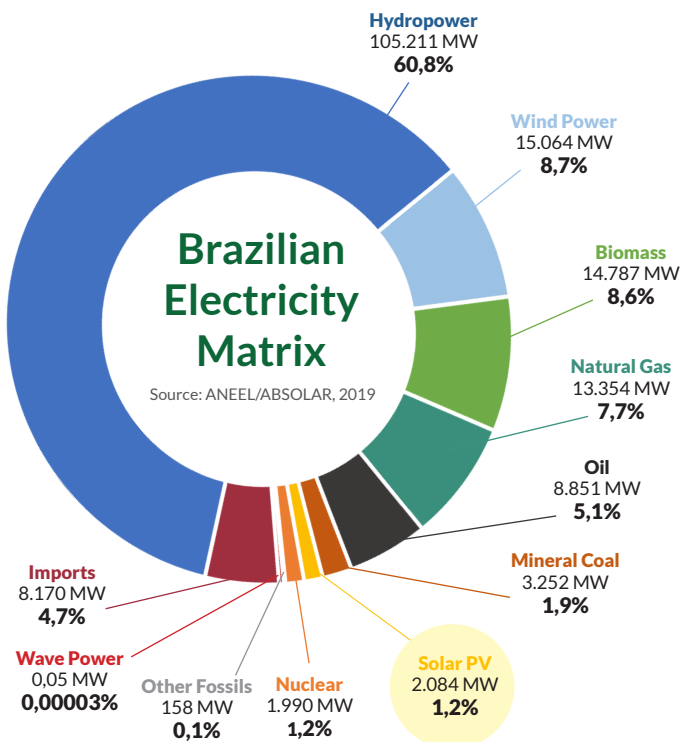
Which countries have invested more in solar PV in 2018?

	1° China	45,0 GW
	2° India	10,8 GW
	3° USA	10,6 GW
	4° Japan	6,5 GW
	5° Australia	3,8 GW
	6° Germany	3,0 GW
	7° Mexico	2,7 GW
	8° Korea	2,0 GW
	9° Turkey	1,6 GW
	10° Netherland	1,3 GW

Which countries lead the world in solar PV cumulative installed?

	1° China	176,1 GW
	2° EUA	62,2 GW
	3° Japan	56,0 GW
	4° Germany	45,4 GW
	5° India	32,9 GW
	6° Italy	20,1 GW
	7° UK	13,0 GW
	8° Australia	11,3 GW
	9° France	9,0 GW
	10° Korea	7,9 GW

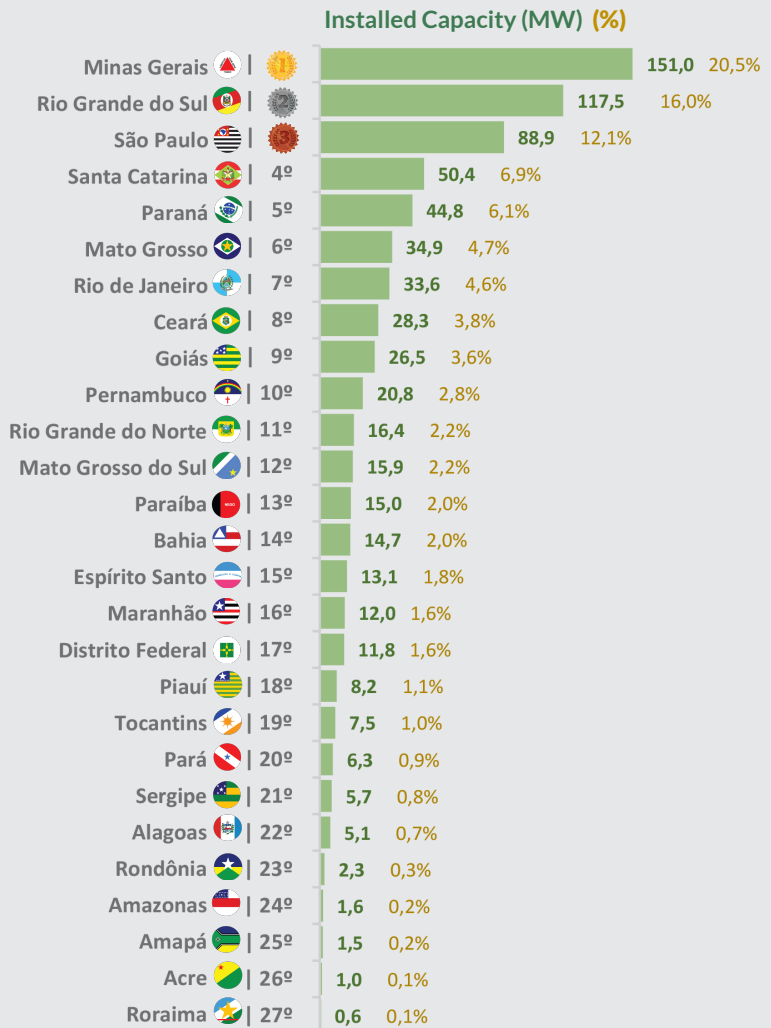
Source: Snapshot of Global PV Markets, IEA PVPS, 2019.



Distributed Generation

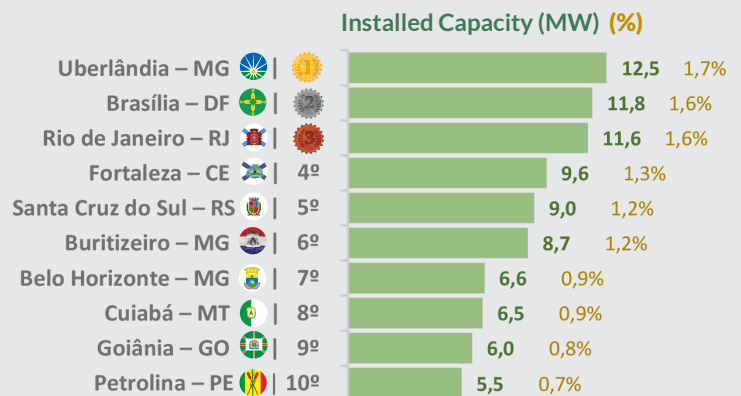
State Ranking

Source: ANEEL/ABSOLAR, 2019.



Municipality Ranking

Source: ANEEL/ABSOLAR, 2019.



What is the Solar PV Installed Capacity in Brazil?

Centralized Generation
2.084,0 MW



Distributed Generation
735,5 MW



Total Operational Installed Capacity
2.819,5 MW

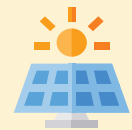
Centralized Generation



R\$ 21,3 billion (US\$ 5,4 billion)

is the projected volume of private investments in the solar PV sector until 2022, related to projects already contracted in energy auctions of the regulated electricity market.

Source: ABSOLAR, 2019. Dollar exchange rate on 03/05/2019 by Banco Central do Brasil.



3,7 GW

is the total solar PV installed capacity of large-scale power plants that will be in operation by 2022.

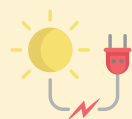
Source: ABSOLAR, 2019.



R\$ 118,07/MWh (US\$ 33,25/MWh)

was the average-price of solar PV in the last auction, making it one of the most competitive sources in Brazil, with lower prices than biomass and hydropower plants.

Source: CCEE, 2018.

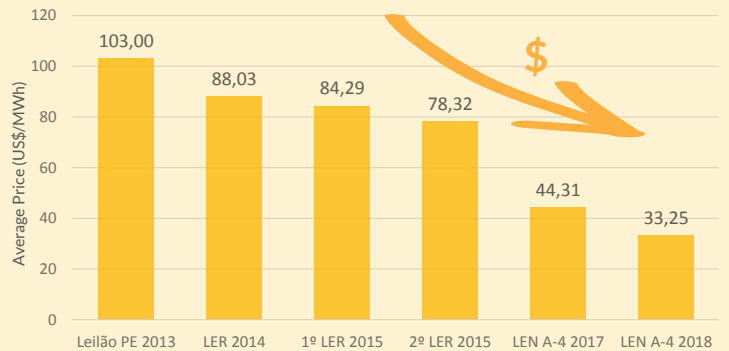


0,6%

of the electricity supplied in Brazil was generated from solar PV source in February 2019.

Source: MME, 2019.

Price Development of Solar PV in the Energy Auctions of the Regulated Electricity Market



Source: CCEE/ABSOLAR, 2019.

Dollar exchange rates based on auction dates by Banco Central do Brasil.

Electricity Generation Records

Solar PV achieved new records of electricity generation in the Northeastern region of Brazil:

DAILY AVERAGE (29/01/2019)

389 MW_{avg}
with a capacity
factor of
33%

DAILY MAXIMUM (09/03/2019)

1.072 MW
at 11h21 a.m
with a capacity
factor of
92%



Source: ONS, 2019.

Distributed Generation

Microgeneration (until 75 kW) and minigeneration (above 75 kW until 5 MW) solar PV systems installed at homes, commercial buildings, industries, rural properties and public buildings.



84,0%

is the share of solar PV installed capacity in micro and minigeneration, leading by far the distributed generation market.



99,6%

of all micro and minigeneration connections are from solar PV systems.



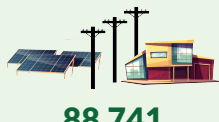
R\$ 4,04 billion (US\$ 1,02 billion)

in cumulative investments since 2012, distributed in all regions and states of the country.



71.701

Solar PV systems connected to the grid.



88.741

consumers receiving electricity credits through local generation, virtual net-metering and community solar.



735,5 MW

is the installed capacity of solar PV source in distributed generation.

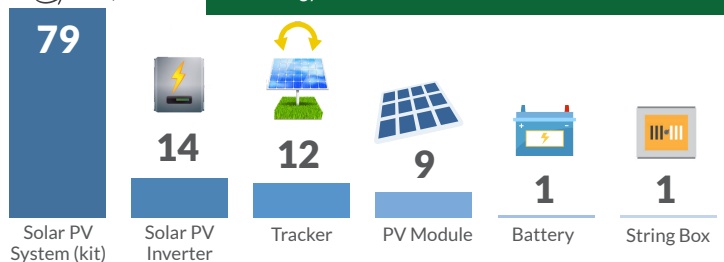
Source: ANEEL/ABSOLAR, 2019. Dollar exchange rate on 03/05/2019 by Banco Central do Brasil.

Value Chain

Number of national manufacturers from the solar PV sector registered at BNDES FINAME financing program:



Brazil needs a competitive and fair industrial policy for the solar PV sector, reducing the prices of components and equipments made in the country, generating more jobs, technology and innovation.



Source: BNDES/ABSOLAR, 2019.

Main Benefits of Solar PV to Brazil



Socioeconomical

- ✓ Reduction of expenses with electricity for the population, businesses and governments, lowering costs to society.
- ✓ Leader in local quality jobs generation, creating from 25 to 30 jobs per MW/year.
- ✓ Attraction of foreign capital and new private investments for the country.



Environmental

- ✓ Generation of clean, renewable and sustainable electricity, free of greenhouse gases emissions, without waste or noise.
- ✓ No water usage during operation, relieving the pressure on water resources.
- ✓ Low environmental impact.



Strategical

- ✓ Diversification of the Brazilian electricity matrix with a new renewable source, increasing reliability of the electricity supply.
- ✓ Reduction of losses and postponement of investments in transmission and distribution grids.
- ✓ Relief of electrical demand during daytime, reducing costs to consumers.



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