



Industry size in Brazil

850
wind farms

9,598
turbines in operation

12
states

23.34GW
of installed capacity

there are others
1.66 GW
in test operation, which should go into operation in the coming weeks

How many energy do they generate?

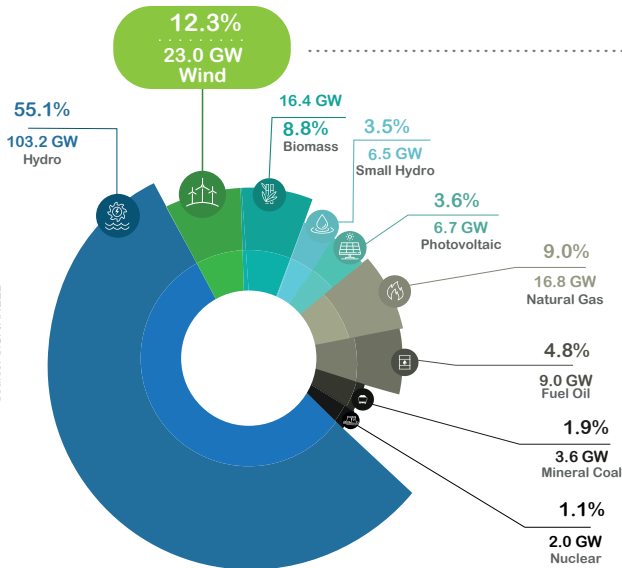
36.2 Million
of households per month can be supplied

72.2TWh
of wind energy were generated in 2021

108.7 Million
of benefited inhabitants

▲27%
growth over the previous year

Brazilian electricity matrix in GW



Solar energy has an additional 14 GW of installed capacity of distributed generation

12%
of all the generation injected into the National Interconnected System in the period

Contributions to wind energy in Brazil

US\$35.8 Billion
Investments in the sector between 2011 and 2020

Between 2011 and 2020, wind power moved

R\$ 321 Billion
in economy

R\$ 110.5 Billion
direct investment in the construction of wind farms

R\$ 210.5 Billion
as indirect effects

Brazil will have about
40.4GW
of wind power installed capacity until 2026*

for each
MW
installed

15 jobs are created



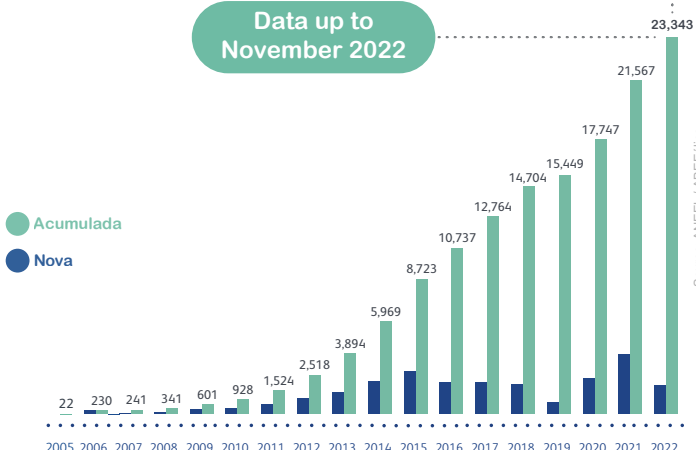
From 2011 to 2020, the construction of wind farms created almost
196 thousand jobs or 10.7 jobs per installed MW.

34.4 Million
tons of CO₂ avoided in 2021 equivalent to the emission of about 34 million cars

From 2016 to 2024, the Brazilian wind sector will have **avoided greenhouse gas emissions valued at between R\$60 and 70 billion.**

Capacity installed evolution in MW

Data up to November 2022



Records by area

NE 120.51%

of the energy consumed in Northeast subsystem came from wind farms, with a capacity factor of **75.07%** and **generation of 14,722 MWmed.** (11/OCT/2022)

SIN 24.48%

of the energy consumed in National Interconnected System came from wind farms, with a capacity factor of **72.98%** and **generation of 16,045 MWmed.** (15/OCT/2022)

S 16.96%

the energy consumed in South subsystem came from wind farms, with a capacity factor of **92.29%** and **generation of 1,796 MWmed.** (07/SEP/2021)

N 6.70%

of the energy consumed in North subsystem came from wind farms, with a capacity factor of **96.97%** and **generation of 413 MWmed.** (04/SEP/2021)

Capacity installed and number of wind farms by state



State	Installed Capacity (MW)	Wind farms	Wind turbines
RN	6,816.92	223	2,750
BA	6,462.67	245	2,583
PI	3,378.75	104	1,210
CE	2,496.94	97	1,121
RS	1,835.89	80	830
PE	989.77	38	456
PB	628.44	30	257
MA	426.00	15	172
SC	242.70	15	174
SE	34.50	1	23
RJ	28.05	1	17
PR	2.50	1	5
TT	23,343.12	850	9,598

There are another 1.66GW in test operation, which should come into operation in the coming weeks.

Did you know?

80% of Brazilian wind farms are in the Northeast, a region that has one of the best winds in the world for producing wind energy.

Favorable winds in Brazil

The favorable winds for producing wind energy are more constant, have a stable speed and do not change direction frequently.

57.9%

was the average monthly Capacity Factor achieved by wind farms in Brazil in 2021, in August.

43.6%

was the average Capacity Factor in Brazil in 2021.

34%

is the Capacity Factor approx. global average.

Benefits of wind energy



Generates income and improves life for landowners with lease for placement of towers



Enables land-owners to **continue planting or growing their animals**



It is renewable, it does not pollute, it contributes for Brazil to fulfill its objectives in the Climate Agreement



One of the **best cost-effective** energy tariffs



Wind parks **do not emit CO₂**



Provides training and qualifications for local labor

The installation of wind farms contributes to increase in the Gross Domestic Product (GDP) and the Municipal Human Development Index (MHDI), as identified by a study by GO Associados.

Through a comparison between a group of municipalities that have wind farms and another that does not, it was possible to conclude that in the municipalities where there are wind farms: to identify that in the municipalities that received their installation:



real GDP increased by 21.15% (period 1999 to 2017)



the MHDI grew about 20% (2000 to 2010 period)

Wind energy occupies little land, allowing the continuation of the creation of animals or plantations. Considering the space chosen for a wind farm, the turbines occupy about 8% of the area, and can reach about 6%.



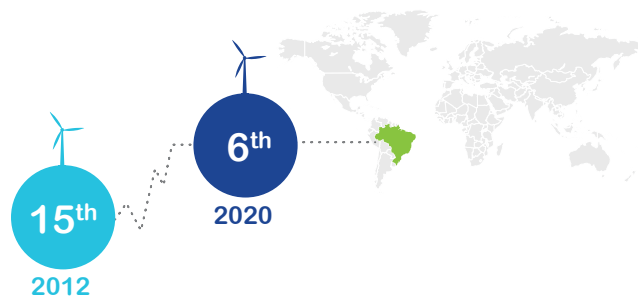
Every BRL 1.00 invested in wind farms increased Brazilian GDP by around BRL 2.9.

It's the power of the winds doubling the benefits!

The data are from the study "Estimativas dos impactos dinâmicos do setor eólico sobre a economia brasileira", by Bráulio Borges, associate researcher at FGV-IBRE and senior economist at LCA Consultores.

International comparisons GWEC

Brazil is ranked 6th in the World Ranking of wind energy installed capacity. In 2012, Brazil was ranked 15th.



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