INFOWIND

#26 | June, 11 - 2022

Industry size in Brazil

812
wind farms

9,249
turbines in operation

12
states

22GW
of installed capacity

there are others
981.8 MW
in test operation, which shouldgo into operation in the coming weeks

Source: Bloomberg New Energy Finance - BNEF / MCTIC / ABEEólica

How many energy do they generate?

28.8Million
of households per month can be supplied

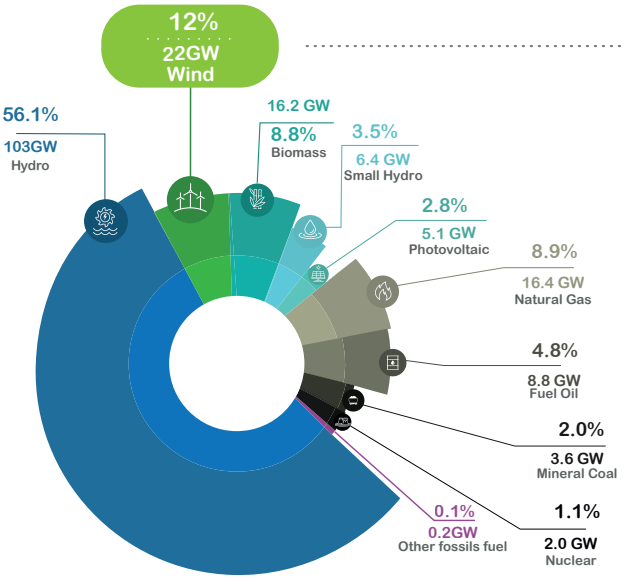
72TWh
of wind energy were generated in 2021

86.4Million
of benefited inhabitants

▲27%
growth over the previous year

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

Brazilian eletricity matrix in GW



Source: SIGA/ANEEL

Solar energy has an additional 11.7 GW of installed capacity of distributed generation

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$ 321Billion
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
37.09GW
of wind power installed capacity until 2026*

for each **MW** installed

15 jobs are created

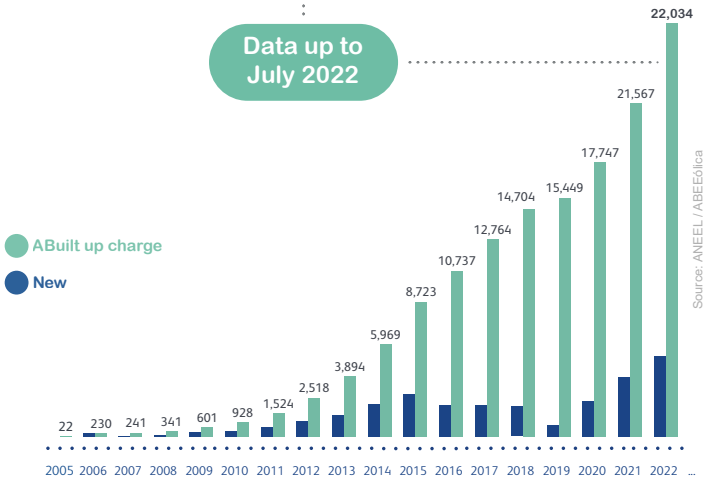
From 2011 to 2020, the construction of wind farms created almost **196 thousand jobs or 10.7 jobs per installed MW.**

21.2 Million
tons of CO_2 avoided in 2020
equivalent to the emission of about **20.9 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 July 2022



Source: ANEEL / ABEEólica

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Records by area

NE 104.70%

of the energy consumed in Northeast subsystem came from wind farms, with a capacity factor of **69.03% and generation of 11,907 MWmed.**
(06/AUG/2021)

SIN 20.05%

of the energy consumed in National Interconnected System came from wind farms, with a capacity factor of **65.96% and generation of 13,264 MWmed.**
(07/SEP/2021)

S 16.96%

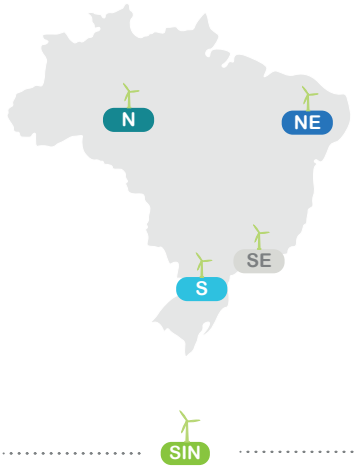
the energy consumed in South subsystem came from wind farms, with a capacity factor of **86.63% and generation of 1,796 MWmed.**
(07/SEP/2021)

N 6.70%

of the energy consumed in North subsystem came from wind farms, with a capacity factor of **96.96% and generation of 413 MWmed.**
(04/SEP/2021)

Source: ONS

Capacity installed and number of wind farms by state



State	Installed Capacity (MW)	Wind farms	Wind turbines
RN	6,764.94	221	2,735
BA	6,116.40	229	2,472
PI	2,516.65	85	1,043
CE	2,496.94	97	1,121
RS	1,835.89	80	830
PE	941.37	37	445
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	22,034.37	812	9,249

There are another 981.8 MW in test operation, which should come into operation in the coming weeks.

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 CO_2**

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)

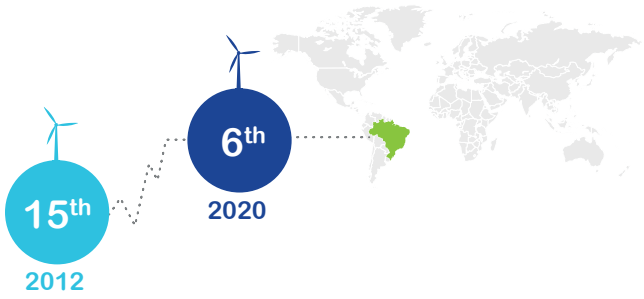
Wind energy occupies little land, allowing the continuation of the creation of animals or plantations. Considering the space chosen for a wind farm, the turbines occupy about 8% of the area, and can reach about 6%.

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 Braulio 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.



Source: GWEC

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.

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