INFOWIND
BRAZIL

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Industry size in Brazil

18GW
of installed capacity

695
Wind Farms

8,300
Turbines in operation

12
States

How many energy do they generate?

55,9TWh
of wind energy were generated in 2019

9.7%
of every generation injected into the National Interconnected System in the period.

15.5%
growth in relation to the year previous. It is worth mentioning that, in the same period, the generation of all sources in the National Interconnected System grew 1.5%

What represents this generation?

28.8Million
of households per month can be supplied

86.3Million
of benefited inhabitants

Brazil will have about **28.7GW** of capacity wind power installed until 2024*

*Considering auctions already carried out and contracts signed in the free market

Contributions to wind energy in Brazil

US$31.3Billion
From 2011 to 2019 the investment in the sector was
2019 = US$ 3.45 billion

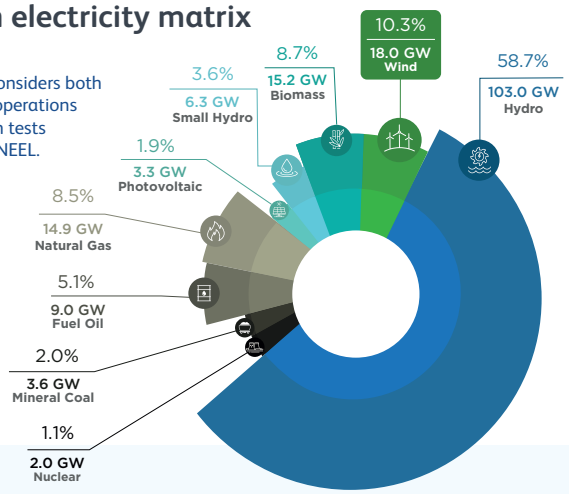
for each MW installed
15 jobs are created.

22.9Million
tons of CO_2 avoided in 2019
equivalent to the emission of about **21.7 million cars.**

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

Brazilian electricity matrix in GW

**This matrix considers both wind farms in operations and the ones in tests approved by ANEEL.



Source: ANEEL / ABEEólica

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:

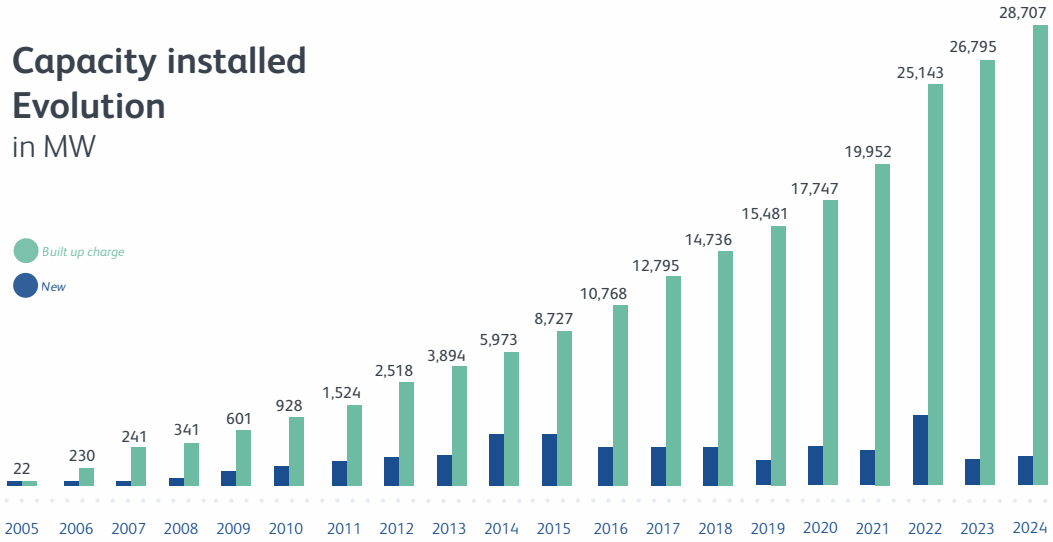
- real GDP increased by **21.15%** (period 1999 to 2017)
- the MHDI grew about **20%** (2000 to 2010 period)

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%**.

Capacity installed and Number of Wind Farms
by State

State	Installed Capacity (MW)	Wind farms
RN	5,154.2	182
BA	4,879.6	189
PI	2,275.9	79
CE	2,179.3	84
RS	1,835.9	80
PE	798,4	34
MA	426,0	15
SC	238,5	14
PB	157,2	15
SE	34,5	1
RJ	28,1	1
PR	2,5	1
TT	18,010.1	695

Capacity installed Evolution
in MW



Source: ANEEL / ABEEólica

Future data in the chart above comes from contracts already confirmed in auctions and transactions completed in the free market. New auctions will add further capacity in coming years.

Records
by area

NE 94.40%

of the energy consumed in Northeast subsystem came from wind farms, with a capacity factor of **71.14% and generation of 9,255.73 MWmed.** *(06/AUG/2020)*

S 16.90%

the energy consumed in South subsystem came from wind farms, with a capacity factor of **85.41% and generation of 1,705.09 MWmed.** *(25/MAY/2020)*

N 7.44%

of the energy consumed in North subsystem came from wind farms, with a capacity factor of **95.73% and generation of 407.82 MWmed.** *(21/DEC/2019)*

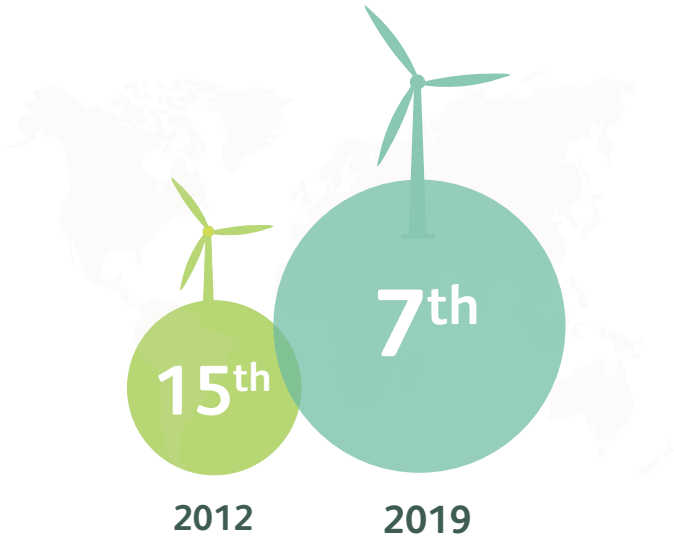
SIN 17.00%

of the energy consumed in National Interconnected System came from wind farms, with a capacity factor of **75.52% and generation of 10,677.60 MWmed.** (06/09/2019)

Source: CCEE / ABEEólica

International comparisons
GWEC

Brazil is ranked 7th 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.

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

Favorable winds in Brazil

34% is the Capacity Factor approx. global average.

42.7% was the average Capacity Factor in Brazil in 2019.

59% was the largest average monthly Capacity Factor that wind energy in Brazil achieved during the "Wind Harvest" period in 2019."

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