



### Industry size in Brazil

**19.1GW**

of installed capacity

**726**

Wind Farms

**8.585**

Turbines in operation

**12**

States

### How many energy do they generate?

**57.0TWh**

of wind energy were generated in 2019

**10.0%**

of all the generation injected into the National Interconnected System in the period.

**1.9%**

growth over the previous year.

### What represents this generation?

**28.8Million**

of households per month can be supplied

**86.4Million**

of benefited inhabitants



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

### Contributions to wind energy in Brazil



**US\$35.8Billion**

Of investments from 2011 to 2020.

for each **MW** installed



**15 jobs are created.**

**21.2Million**

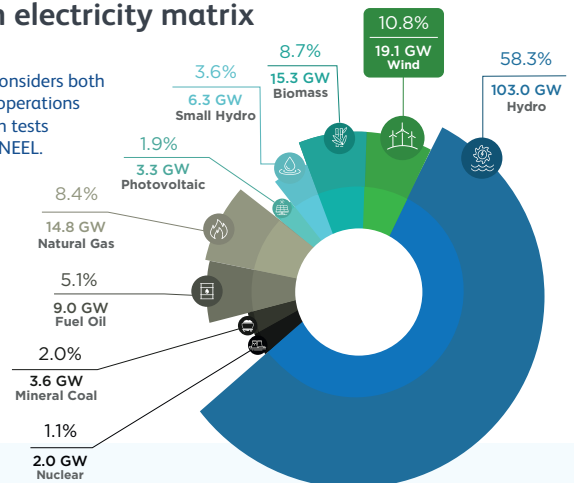
tons of CO<sub>2</sub> avoided in 2019



equivalent to the emission of about **20.9 million cars.**

### 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<sub>2</sub>



Provides training and qualifications for local labor

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)

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.

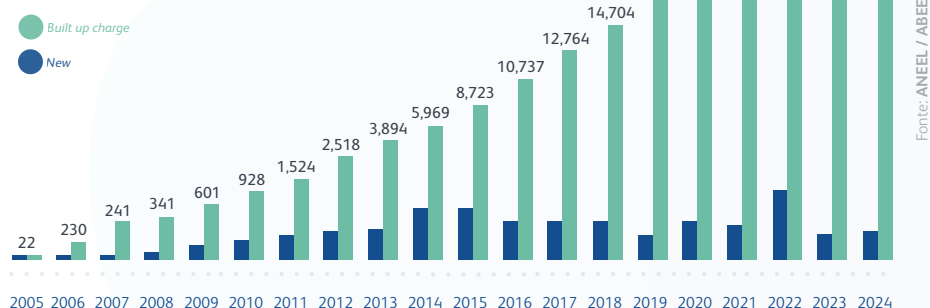


Wind energy occupies little land, allowing the continuation of the creation of animals or plantations. Considering the space chosen for a wind farm, the turbines occupy about **8% of the area, and can reach about 6%.**

## Capacity installed and Number of Wind Farms by State

State	Installed Capacity (MW)	Wind farms	Wind turbines
RN	5,574.8	191	2,444
BA	5,267.8	201	2,261
CE	2,385.1	92	1,115
PI	2,354.7	81	1,007
RS	1,835.9	80	830
PE	798.4	34	417
MA	426.0	15	172
SC	238.5	14	173
PB	157.2	15	121
SE	34.5	1	23
RJ	28.1	1	17
PR	2.5	1	5
TT	19,103.4	726	8,585

## Capacity installed Evolution in MW



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%**

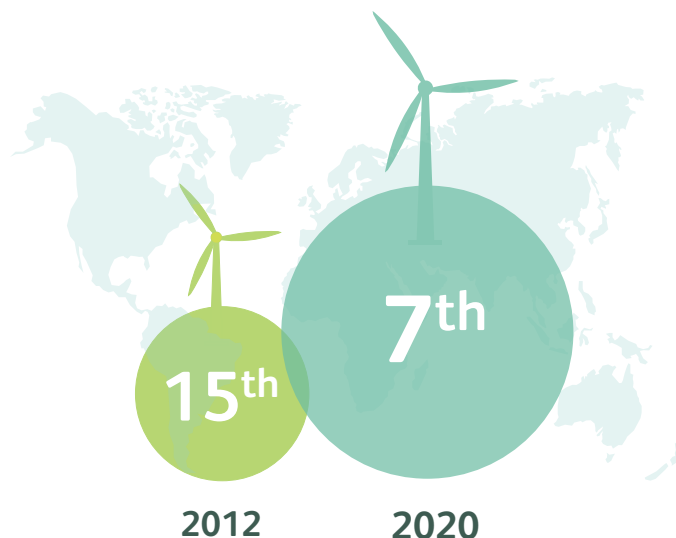
of the energy consumed in North subsystem came from wind farms, with a capacity factor of **95.73%** and generation of **407.82 MWmed.** (21/DEC/2019)

**SIN 15.06%**

of the energy consumed in National Interconnected System came from wind farms, with a capacity factor of **62.57%** and generation of **10,733.44 MWmed.** (08/APR/2019)

## International comparisons GWEC

Brazil is ranked 7th in the World Ranking of wind energy installed capacity. In 2012, Brazil was ranked 15th.



## 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.

**40.6%**

was the average Capacity Factor in Brazil in 2020.

**59%**

was the largest average monthly Capacity Factor that wind energy in Brazil achieved during the "Wind Harvest" period in 2020."