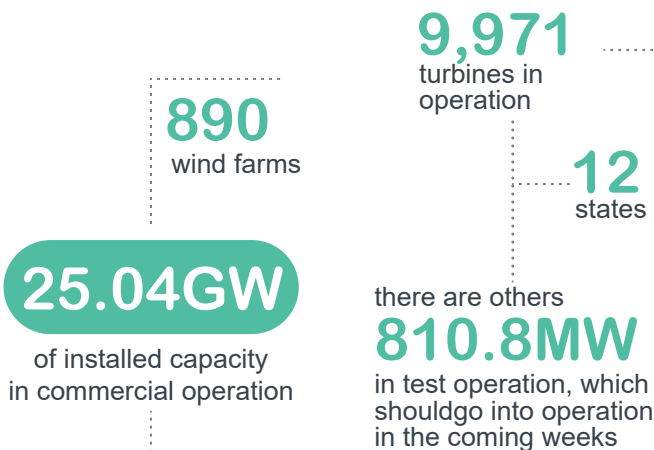
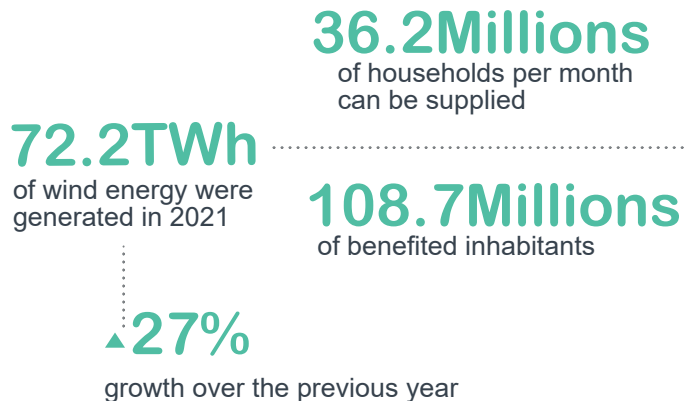




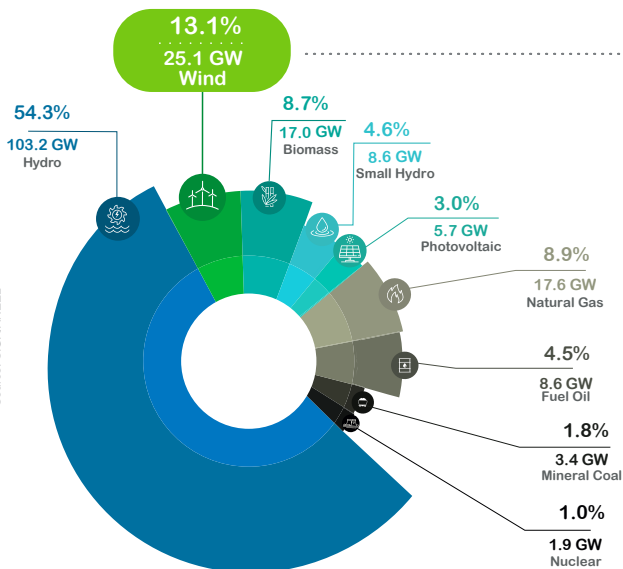
## Industry size in Brazil



## How many energy do they generate?



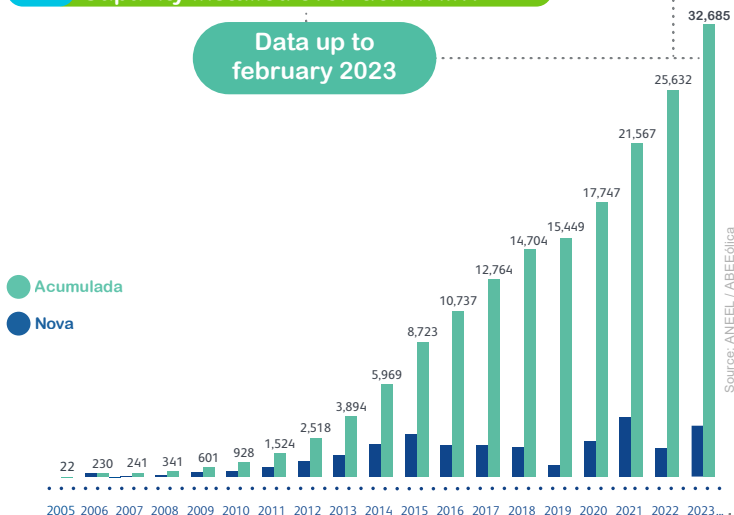
## Brazilian electricity matrix in GW



Solar energy has an additional 17.7 GW of installed capacity of distributed generation

## Capacity installed evolution in MW

Data up to february 2023



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

## Contributions to wind energy in Brazil

Brazil will have about **44.78GW** of wind power installed capacity until 2028

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

Between 2011 and 2020, wind power moved

**R\$ 321 Billions** in economy

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

**R\$ 210.5 Billions** as indirect effects

for each **MW** installed

**10,7 jobs** are created



From 2011 to 2020, the construction of wind farms created almost **190 thousand jobs**

Source: Bráulio Borges, pesquisador-associado do FGV-IBRE e economista-sênior da LCA Consultores | Trabalho preparado para a ABEEólica - fevereiro de 2022 https://abeeolica.org.br/wp-content/uploads/2022/02/Estudo-Bráulio\_Final.pdf

**34.4 Millions** tons of CO<sub>2</sub> avoided in 2021 equivalent to the emission of about **34 millions cars**

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



ONSHORE OFFSHORE

## Records by area

### NE 120.51%

of the energy consumed in Northeast subsystem came from wind farms, with a capacity factor of **71.14%** 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 **69.56%** 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

UPDATED ACCORDING TO ONS IN FEBRUARY 2023

State	Installed Capacity (MW)	Wind farms	Wind turbines
RN	7,354.83	237	2,880
BA	7,283.37	264	2,758
PI	3,527.25	107	1,237
CE	2,568.34	98	1,138
RS	1,835.89	80	830
PE	1,061.77	40	472
PB	672.44	31	265
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	25,037.63	890	9,971



There are another 810.8MW 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.

**52%**

was the average Capacity Factor in Brazil in 2021 according to IRENA (Renewable Power Generation Costs in 2021)

**39%**

was the world average Factor according to IRENA (Renewable Power Generation Costs in 2021)

## 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**

The installation of wind farms contributes to increase in the Gross Domestic Product (GDP) and the Municipal Human Development Index (MHD), 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 MHD 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%.



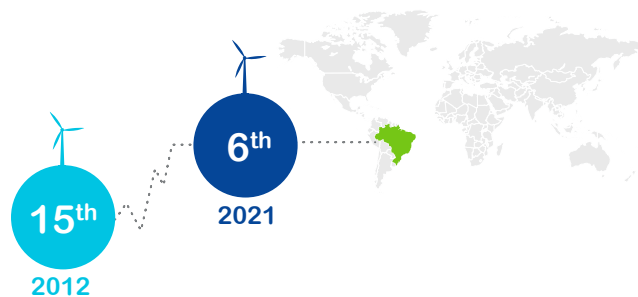
Every BRL 1.00 invested in wind farms increased Brazilian GDP by around BRL 2.9.

**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.



## More informations:

[www.abeolica.org.br](http://www.abeolica.org.br)

[facebook.com/abeolica](https://facebook.com/abeolica)

[instagram.com/abeolica](https://instagram.com/abeolica)

[youtube.com/abeolica](https://youtube.com/abeolica)

[twitter.com/abeolicaeolica](https://twitter.com/abeolicaeolica)



ONSHORE OFFSHORE

**ABEEólica**  
ASSOCIAÇÃO BRASILEIRA DE ENERGIA EÓLICA E NOVAS TECNOLOGIAS