**Benefits of Wind Energy**

- Generates income and improves life for landowners with lease for placement of towers
- It is renewable, it does not pollute, it contributes for Brazil to fulfill its objectives in the Climate Agreement
- Wind parks do not emit CO₂
- Enables land-owners to continue planting or growing their animals
- One of the best cost-effective energy tariffs
- Provides training and qualifications for local labor
- Real GDP increased by 21.15% (period 1999 to 2017)
- The MHSI 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%.

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**Industry size in Brazil**

- **18.62 GW** of installed capacity
- **713** Wind Farms
- **8,469** Turbines in operation
- **12** States

**How many energy do they generate?**

- **57.0 TWh** 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?**

- **28.8 Million** of households per month can be supplied
- **86.4 Million** of benefited inhabitants

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**Contributions to wind energy in Brazil**

- **US$35.8 Billion** of investments from 2011 to 2020.
- 21.2 Million tons of CO₂ avoided in 2019 equivalent to the emission of about 20.9 million cars.
- 15 jobs are created for each MW installed.

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**Brazilian electricity matrix in GW**

- **58.5%** Hydro
- **29.1 GW** of wind power installed capacity until 2024*
- **18.62 GW** of installed capacity
- **11.3 GW** of biomass
- **6.3 GW** Small Hydro
- **10.6%** of wind energy
- **14.8 GW** Natural Gas
- **8.7%** of wind power
- **5.1%** of wind power
- **2.0 GW** Fuel Oil
- **3.6%** of wind power
- **1.9%** of wind power
- **3.3 GW** Mineral Coal
- **1.1%** of wind power
- **2.0 GW** Nuclear
- **103.0 GW** Hydro

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

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

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*May 10 - 2021*
Capacity installed and Number of Wind Farms by State

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.

Source: GWEC

<table>
<thead>
<tr>
<th>State</th>
<th>Installed Capacity (MW)</th>
<th>Wind farms</th>
<th>Wind turbines</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN</td>
<td>5,266.2</td>
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<td>2,366</td>
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<tr>
<td>MT</td>
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<td>5</td>
</tr>
<tr>
<td>RN</td>
<td>18,621.7</td>
<td>713</td>
<td>8,469</td>
</tr>
</tbody>
</table>

Records by area

NE 94.40% - 71.14% 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% - 95.73% 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% - 75.52% 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)

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.

Is the Capacity Factor approx. global average. 40.6% 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.

Favorable winds in Brazil