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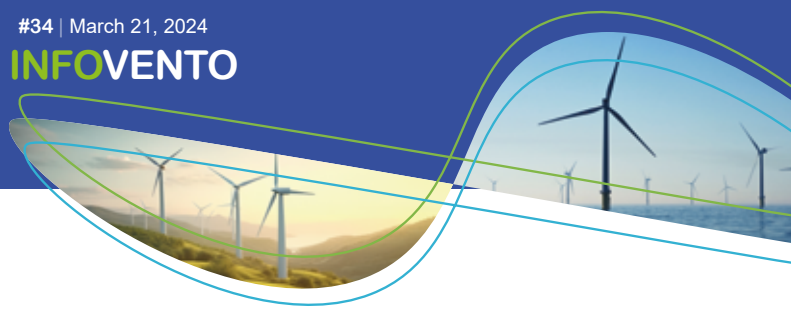
ABEEólica

ASSOCIAÇÃO BRASILEIRA DE ENERGIA EÓLICA E NOVAS TECNOLOGIAS

#34 | March 21, 2024

INFOVENTO



Industry size in Brazil

11,183 turbines in operation

1,043 Wind farms

12 states

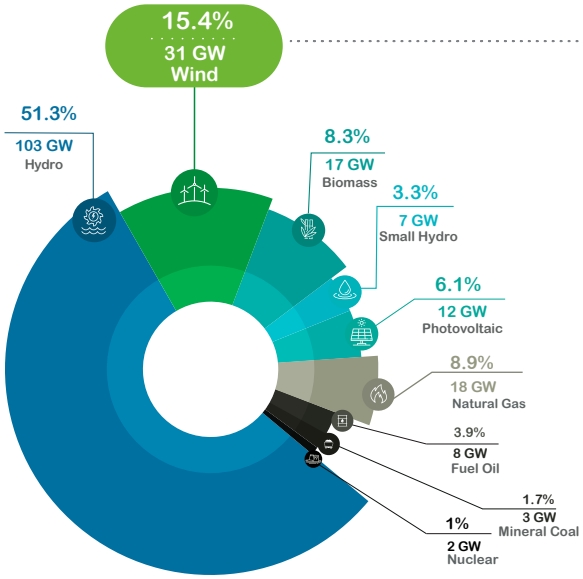
31.1 GW of installed capacity in comercial and test operation

The data reflects:

- **29.95 GW** in commercial operation
- **1.2 GW** in test operation

Source: ABEEÓLICA/ANEEL

Brazilian eletricity matrix in GW

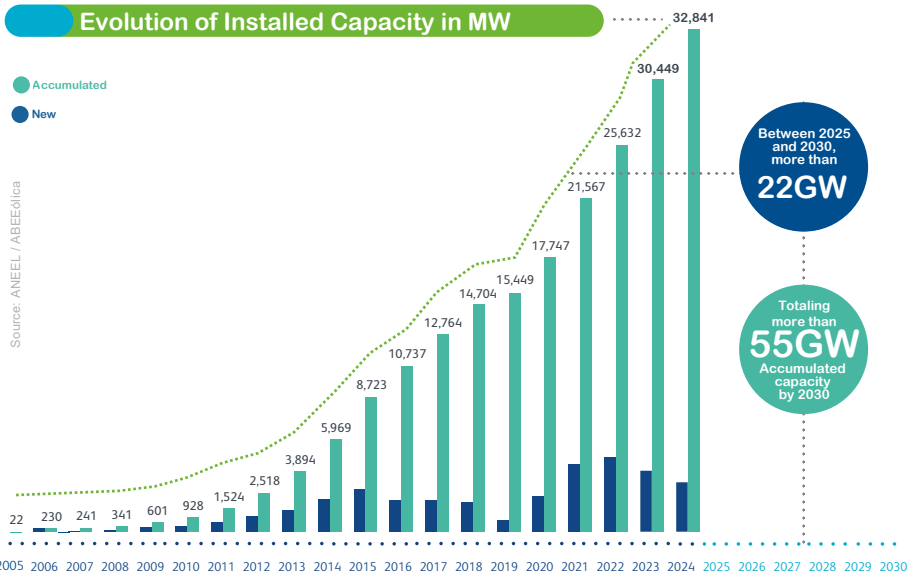


Source: SIGA/ANEEL

Solar energy accounts for an additional 27.7 GW of installed capacity in distributed generation.

Data up to March 2024

Evolution of Installed Capacity in MW



Source: ANEEL / ABEEólica

Between 2025 and 2030, more than **22GW**

Totaling more than **55GW** Accumulated capacity by 2030

Power Generation in 2023

more than **47 Millions** of households per month can be supplied

95,88TWh of wind energy were generated in 2023

141 Millions of benefited inhabitants

▲17.7% growth over the previous year

15.3% of all the generation injected into the **National Interconnected System** in the period

Contributions to wind energy in Brazil

US$48.6 Billions IInvestments in the sector between 2012 and 2023

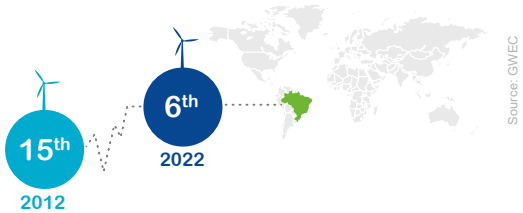
for each **MW** Installed

30.03 Millions tons of CO_2 avoided in 2023

equivalent to the emission of about **70 millions cars**

International comparisons GWEC

Brazil is ranked **6th in the World Ranking** of wind energy installed capacity. In 2012, Brazil was ranked 15th.



Source: GWEC

* The future data presented in the above graph refers to contracts secured in auctions already conducted and in the free market. New auctions will add more installed capacity for the coming years.

Installed capacity and Wind Farms by state

UPDATED ACCORDING TO ANEEL / ABEEÓLICA IN AUGUST 2023

ST	Power (MW)	Wind Farm	Wind Turbines
RN	9,963.9	303	3,413
BA	9,715.9	328	3,243
PI	4,050.5	118	1,328
CE	2,568.3	98	1,138
RS	1,936.7	81	854
PE	1,173.3	43	494
PB	992.2	39	322
MA	426.0	15	172
SC	242.70	15	174
SE	34.50	1	23
RJ	28.10	1	17
PR	2.50	1	5
TT	31,134.5	1,043	11,183

SIN

There are another 1,006.2 MW in test operation.

Wind Power Generation Record by region on a daily basis

NE 138.10%

of the energy consumed in the Northeast subsystem came from wind farms, with a capacity factor of **16.835 MWmed.**
(July,20/2023)

SIN 25.63%

of the energy consumed in the National Interconnected System) came from wind farms, with a capacity factor of **18.397 MWmed.**
(July, 20/2023)

S 16.96%

of the energy consumed in the South subsystem came from wind farms, with a capacity factor of **1.796 MWmed.**
(September, 07/2021)

N 6.70%

of the energy consumed in the North subsystem came from wind farms, with a city factor of **413 MWmed.**
(September,04 /2021)

Source: ONS (http://www.ons.org.br/Paginas/resultados-da-operacao/historico-da-operacao/recordes.aspx)

The importance of BESS (Battery Energy Storage Systems)

They are essential for the storage and efficient management of energy, especially when integrated with wind energy. **They allow the storage of excess energy generated by wind farms during periods of strong winds, for later use during periods of low generation or high demand.**

The integration of battery systems with wind energy in the SIN (National Interconnected System) brings various benefits, including reducing dependence on non-renewable energy sources, increasing the reliability of energy supply, smoothing fluctuations in wind generation, and the possibility of improving the operational efficiency of the electrical grid.

Battery systems play a crucial role in stabilizing the electrical grid, providing instant energy to compensate for fluctuations in wind generation, thus ensuring a smooth and reliable **transition between periods of high and low wind energy generation.**

The combination of battery systems and wind energy not only contributes to the reduction of greenhouse gas emissions and the mitigation of climate change but also **promotes energy independence, diversification of the energy matrix, and sustainable development of the national energy sector.**

Did you know?

Gender inclusion in the eletric sector

Source: IRENA (2020)

National and international initiatives are being created to accelerate women's careers in the wind industry, support their path to leadership positions, and promote a global network of guidance, knowledge sharing, and empowerment.

Sim, elas existem
EmpodereC
Movimento Mulheres 360
WEPs (ONU e Pacto Global)
WIW Women in Wind (GWEC e GWNET)
Women in Green Hydrogen
Lights on Women

Women represent only

21%

of the workforce in the **wind energy sector**

40%

Perceived wage inequalities are lower in the wind energy sector 40% than in the general economy (68%).

Women are often seen as **possessing valuable skills and knowledge.**

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