INDUSTRY SIZE IN BRAZIL

- **13 GW** of installed capacity
- **520 wind farms**
- **6,600 turbines** in operation

UP TO:

OPERATING IN 12 STATES

AND HOW MANY ENERGY DO THEY GENERATE?

- In 2017, wind generated a total of 40.46 TWh during the year.
- This represents a 26.2% increase compared to 2016.
- This is 7.4% of all the energy fed into the National Interconnected System in 2017.

WHAT DOES THIS GENERATION MEAN?

- AN AVERAGE OF 22 MILLION HOUSEHOLDS WERE SUPPLIED BY WIND POWER MONTHLY IN 2017
- AROUND 67 MILLION PEOPLE

Enough energy was generated from wind in 2017 to power a population larger than the entire northeast region of Brazil.

By 2023 over 4.7 GW will be installed and there will be an additional 200 wind farms, considering only past auctions. New auctions will add even more wind energy capacity.

RECORDS

**NORTHEAST**

On September 10, 2017, 70.45% of all energy used in the northeast came from wind farms operating at a 71.21% capacity factor.

**SOUTH**

On October 8, 2017, 16.59% of the energy used in the south came from wind farms operating at 67.58% capacity factor.

**NORTH**

On October 1st, 4.16% of energy used in the north came from wind farm at a 96.70% capacity factor.

**SIN National Integrated System**

On September 10, 2017, 14.33% of all energy used in the National Integrated System came from wind farms operating at a 69.88% capacity factor.

FAVORABLE WINDS IN BRAZIL

- The average capacity factor for wind farms worldwide is around **25%**
- The average capacity factor in Brazil in 2017: **42.9%**

From July to November, the windy season, the capacity factor for Brazil can be higher than 60%.

Why are winds in Brazil so good?

- Same direction
- Constant
- Blow almost always pretty much at the same speed

Such winds are abundant in Brazil, especially in the northeast and south.
CONTRIBUTIONS TO WIND ENERGY IN BRAZIL

From 2010 to 2017 the investment in the sector was US$ 32 billion

Wind energy avoided the emission of about 21 million tons of CO₂ in 2017. This is equivalent to the annual emissions of some 16 million automobiles

Every MW installed creates 15 jobs

Meaning wind energy has already created 190 thousand jobs.

INTERNATIONAL COMPARISONS

Brazil passed Canada in the World Ranking of installed capacity, and is now 8th. In 2012, Brazil was ranked 15th.

BENEFITS OF WIND ENERGY

- Wind power is renewable, non-polluting, has low environmental impact and helps Brazil fulfill its Climate Agreement Goals.
- Wind parks do not emit CO₂.
- The best prices for energy offered at the December 2017 auctions came from wind farms.
- Generates income and improve the quality of life of land-owners who lease their land for wind tower placement.
- There are now some 6,500 such towers in operation in Brazil. We believe some 4,000 families are receiving over R$ 10 million a month in total from leasing land for towers.
- Enables land-owners to continue planting their crops or growing their animals.
- Provides training and qualifications for local labor.

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.