



## M&A – Key Transactions (Jul/Aug 18)

**Omega Geração acquires 50% of Complexo Pirapora (solar) for BRL 1.1 B (Aug-18)**

Omega Geração, a Brazilian renewable energy company controlled by Tarpon and currently managing a 476 MW wind and hydro portfolio, acquired a 50% stake in Pirapora Complex, the largest solar complex in Brazil for BRL 1.1 B (BRL 6.85 M/MW). The complex has 321 MW installed capacity and a 20-year PPA at an average rate of BRL 330/MWh. EDF Renewables owns the other 50%

**Engie Brasil buys out the remaining 50% of Engie SDG for BRL 35.1 MM (Jul-18)**

Engie Brasil paid BRL 35.1 MM to purchase 100% of Engie Solar Distributed Generation, a company with 1,800 systems and 9.7 MWp installed capacity in 16 Brazilian states.

## Indices

### Energy Price Indices

	Center-West	Southeast	South	Northeast	North
August PLD* (USD/MWh)	122	122	122	122	122
July PLD* (USD/MWh)	135	135	135	135	135
Hydro Reservoir Level - August/18**	28%	28%	41%	32%	54%

### Economic Indices

Brazilian Treasury Bonds - NTN2045***	5.8% + IPCA per annum
Brazilian CPI - IPCA - YTD	2.94%
Brazilian CPI - IPCA - 12M	4.48%
Average FX Rate LTM (BRL/USD)	3.44

\* PLD: Average Spot Market Energy price

\*\* Hydro Reservoir Level: used to calculate the PLD and to determine when thermal plants must be turned on to provide security to the system.

\*\*\* Brazilian Treasury Bonds NTN2045: indexed to IPCA (Brazilian CPI - Central Bank inflation guidance)

**Raízen and Geo Energética to build a BRL 153 M Biogas plant (Aug-18)**

The companies announced they will create a JV to build a biogas power plant in Guariba-SP. The plant will produce biogas from the byproducts of sugarcane, generating 15.8 MWa with 11 MWa already sold at a 2016 auction with a PPA of BRL 274/MWh and a 30-year contract. Raízen will hold 85% of the JV and Geo Energética the remaining 15%.

**Equatorial buys Cepisa from Eletrobras (Jul-18)**

Equatorial Energia was the sole bidder in the auction to acquire Cepisa (PI) from Eletrobras. The company was the first of 6 subsidiaries on sale. The total investment was BRL 815 M, where 720 M will be injected into the company and 95 M will be paid to the Federal Government as a grant.

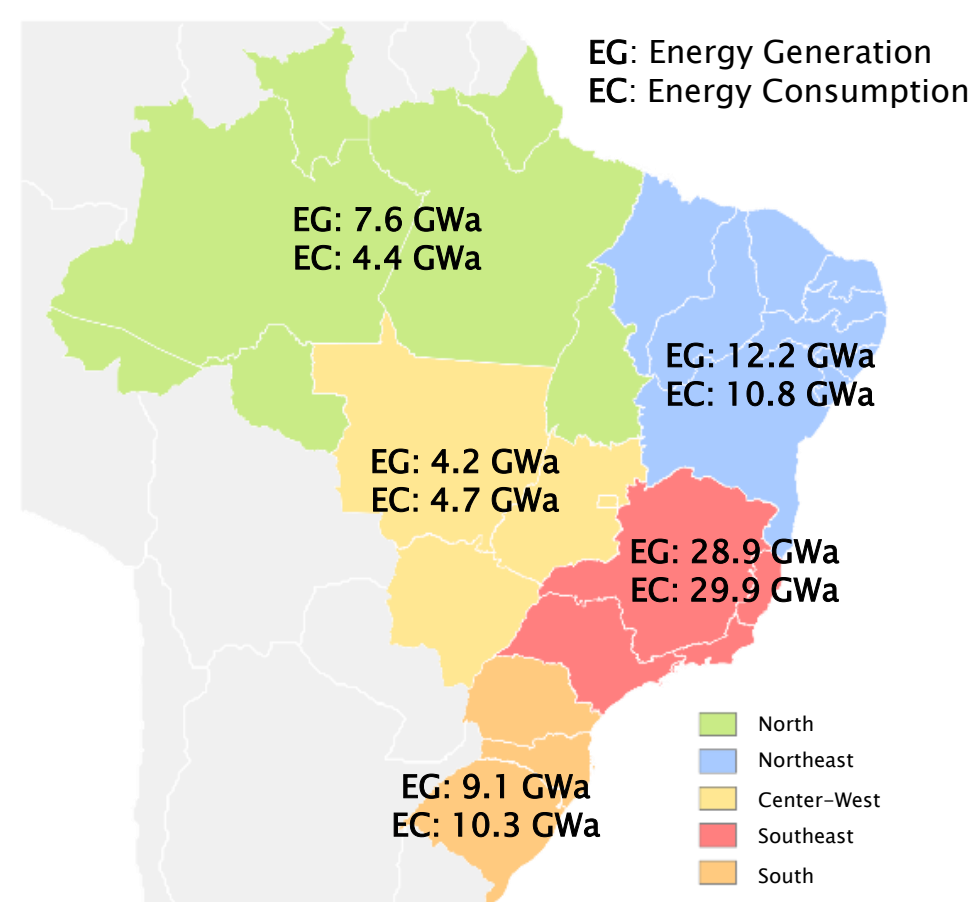
**Enel acquires 93.3% of Eletropaulo for BRL 7 B (Jun/Jul-18)**

Enel spent over BRL 7 B to buy 93.3% of Eletropaulo, the largest power distributor in Brazil with over 7 million customers in São Paulo, thereby increasing the company's customer base to 17 million. The final bid of BRL 45.2/share was higher than Iberdrola's Neoenergia bid of BRL 39.5/share. Enel will also inject BRL 1.5 B into the company.

**Foreign power companies' presence grows in Brazil (Aug-18)**

The Brazilian power sector registered more than 15 M&A transactions since 2016 worth BRL 86.2 B. Most of that amount (95%) came from foreign companies, mainly state-owned enterprises.

### Energy Generation and Consumption

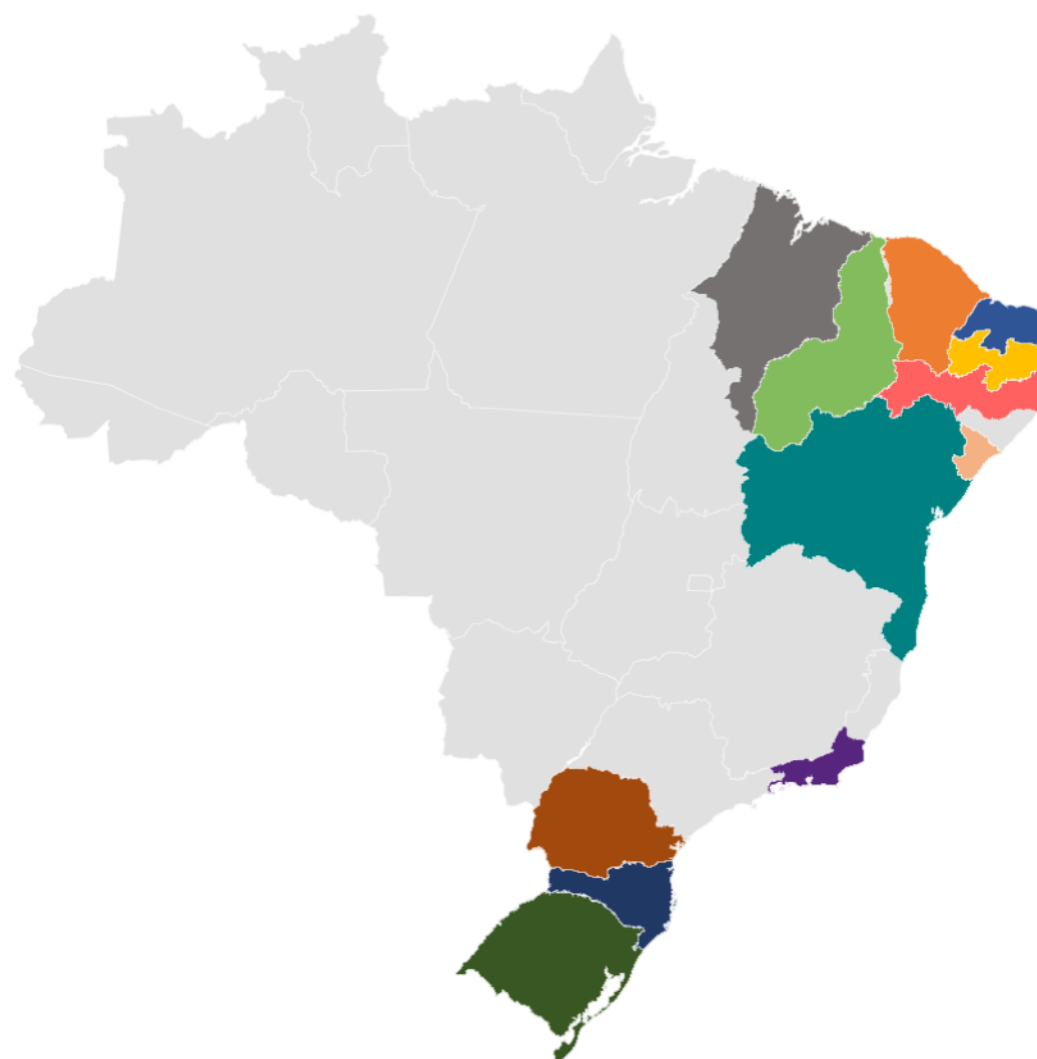


Sources: ANEEL, ONS, EPE, CCEE, CTEE, Valor, Canal Energia, Reuters.

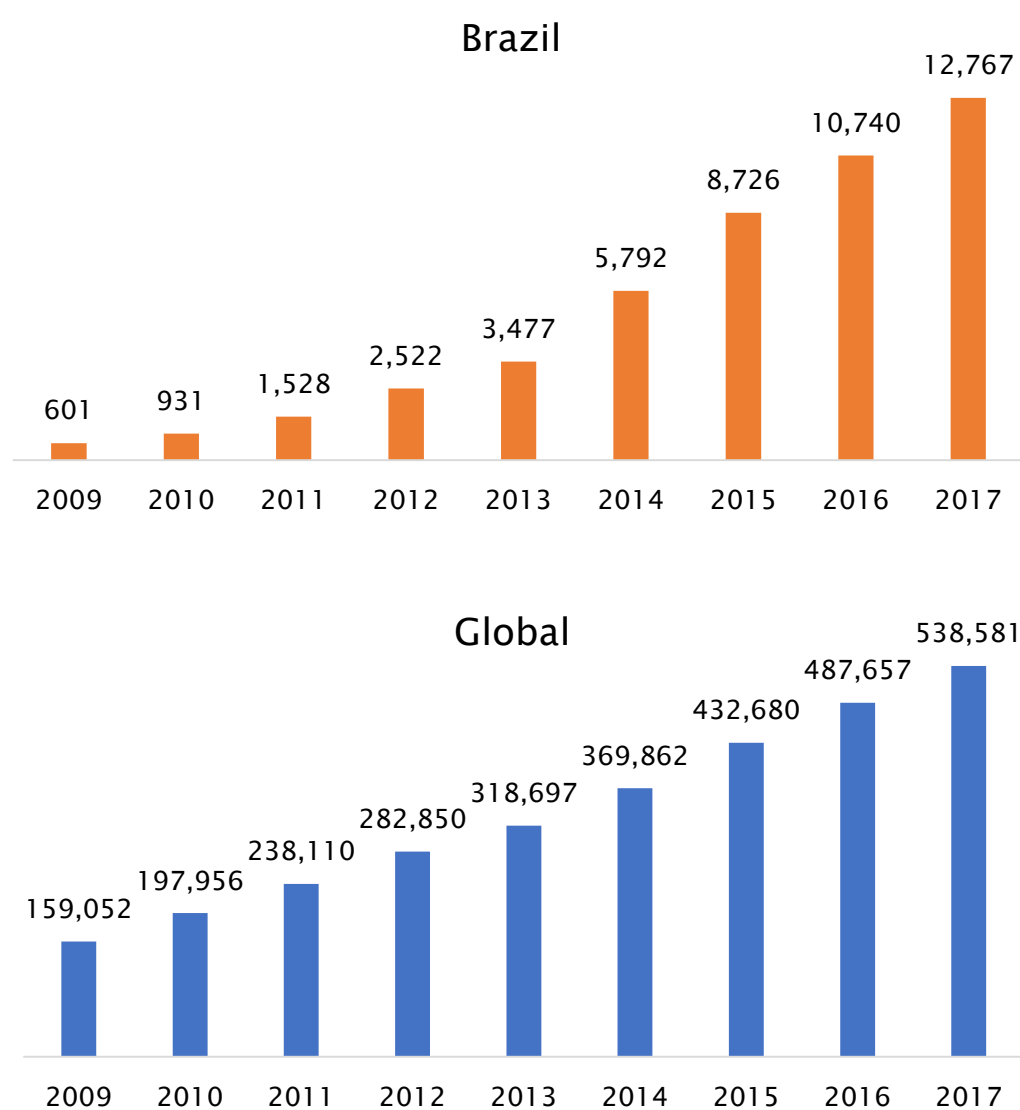
## Outlook: Wind Power Generation in Brazil

### Wind Installed Capacity and Wind Farms per State

State	Installed Capacity (MW)	Farms
RN	3,723	137
BA	2,672	103
CE	2,018	78
RS	1,832	80
PI	1,443	52
PE	782	34
SC	239	14
MA	221	8
PB	157	15
SE	35	1
RJ	28	1
PR	3	1
<b>Total</b>	<b>13,153</b>	<b>524</b>



### Growth of Wind Installed Capacity [MW]



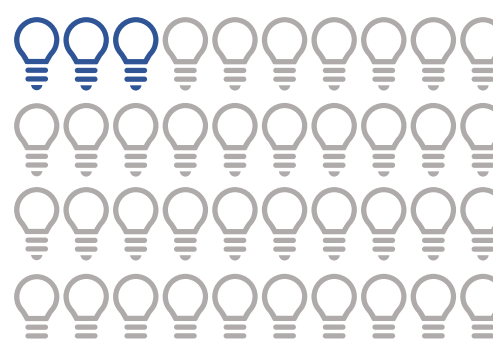
### Wind in Brazil in Numbers



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



The global average for wind capacity factor is 25%, while Brazil has an average of 43%, reaching more than 60% from July to November.



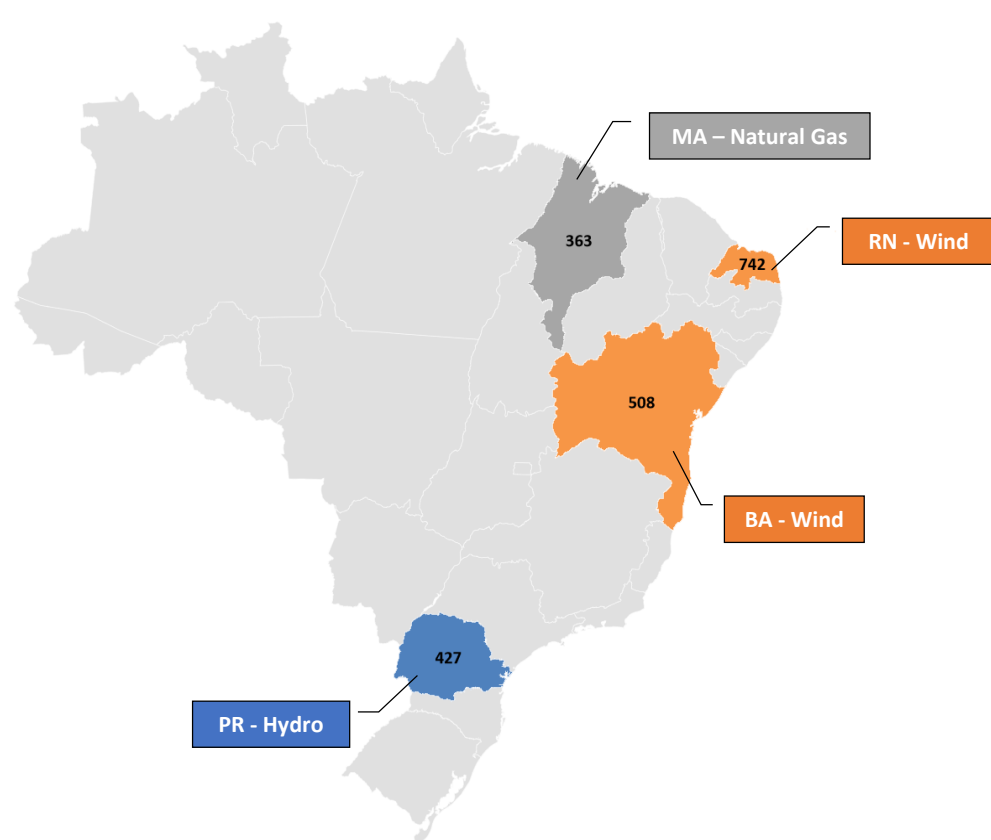
In 2017, wind generated a total of 40.5 TWh, an increase of 26% compared to 2016. This represented 7.4% of all the energy produced that year.

Sources: ABEEÓLICA, GWEC.

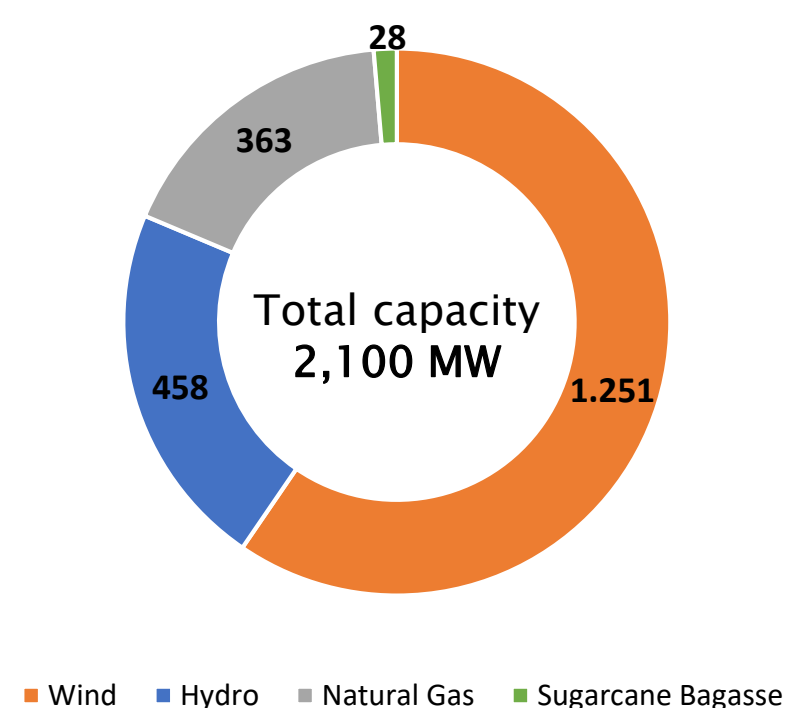
## Brazilian New Energy 'A-6' Auction - August 31, 2018

Following the successful power auction last April, the Brazilian Ministry of Mines and Energy (MME) held a new power auction on August 31, 2018. By the end of the auction, 11 hydro power plants, 48 wind farms and 3 thermal power plants sold 1,228 MWa for an average price of 36.1 USD/MWh, which equates to an average discount of 46.9% over the initial bidding price. The main bidders were Eneva, Copel, Neoenergia, CPFL Renováveis and EDP Renováveis. The highlights of the auction were HPP Baixo Iguaçu (171 MWa) and natural gas TPP Parnaíba (326 MWa). A total of 19 distributors participated. The COD for the projects is January 1, 2024. Hydro contracts remain the longest at 30 years, while thermal is contracted for 25 years and wind for 20 years.

**New Capacity by State [MW]**



**New Capacity by Source [MW]**



## Auction Overview

### Wind

Hired Volume: 658.6 MWa  
Avg. Price: USD 21.86/MWh  
Discount: 60.0%

CAPEX: USD 1,405 MM  
1,124 USD/MW

### Hydro

Hired Volume: 232.6 MWa  
Avg. Price: USD 39.23/MWh  
Discount: 13.4%

CAPEX: USD 172 MM  
375 USD/MW

### Thermal

(Natural Gas + Sugarcane Bagasse)

Hired Volume: 337.4 MWa  
Avg. Price: USD 43.31/MWh  
Discount: 41.6%

CAPEX: USD 274 MM  
699 USD/MW

Source: CCEE.

## ITA Capital

ITA Capital is your partner on the ground in Brazil to help navigate the local cultural and political landscape and to assist on regulatory and tax issues for renewable energy infrastructure assets at all stages of development. Our team has developed a strong expertise with over 15 years of investment advisory in Brazil and abroad. Please feel free to contact us if you need a local partner or advisor in this unique and complex market.