



*BRAZILIAN ELECTRICITY REGULATORY AGENCY*

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**INVESTMENTS FOR ELECTRICITY  
INFRASTRUCTURE IN BRAZIL**  
**Challenges for the Regulator**

Paris, 10th April 2018

# BRAZIL SUMMARY

**Territorial area** 8.515 million km<sup>2</sup>

**Total population - 2017** 208 million inhabitants

**Population annual growth** 1.200.000/year

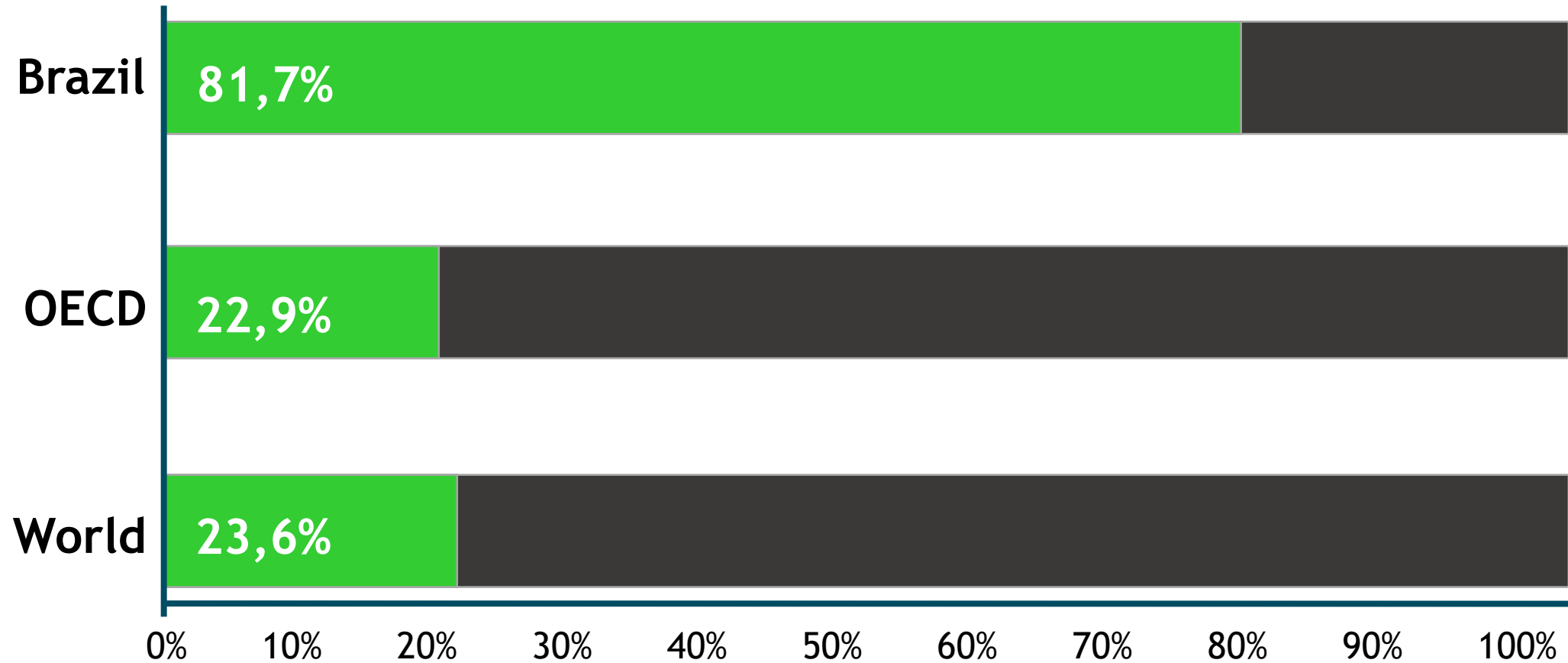
**Monthly new residential consumers** 125.000

**AVERAGE ENERGY CONSUMPTION GROWTH**

**ANNUAL RATE 4%**



# Renewables in Electricity Production



Source: EPE/MME with data from IEA.

# THE CHALLENGE



**INFRASTRUCTURE  
EXPANSION**

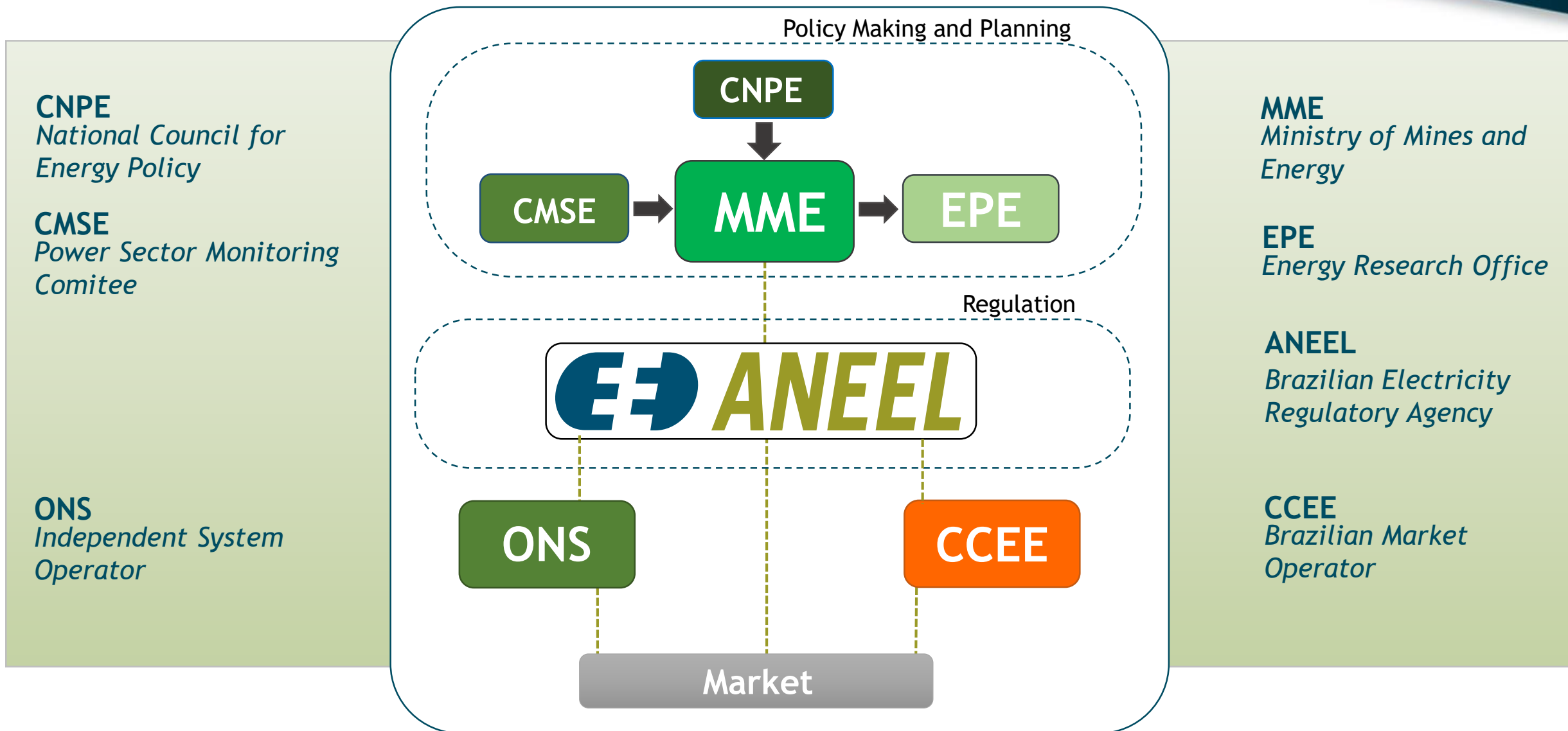


**COMPETITIVE  
PRICES**



**CLEAN  
ENERGY MIX**

# INSTITUTIONAL STRUCTURE



# AUCTION PROCESS



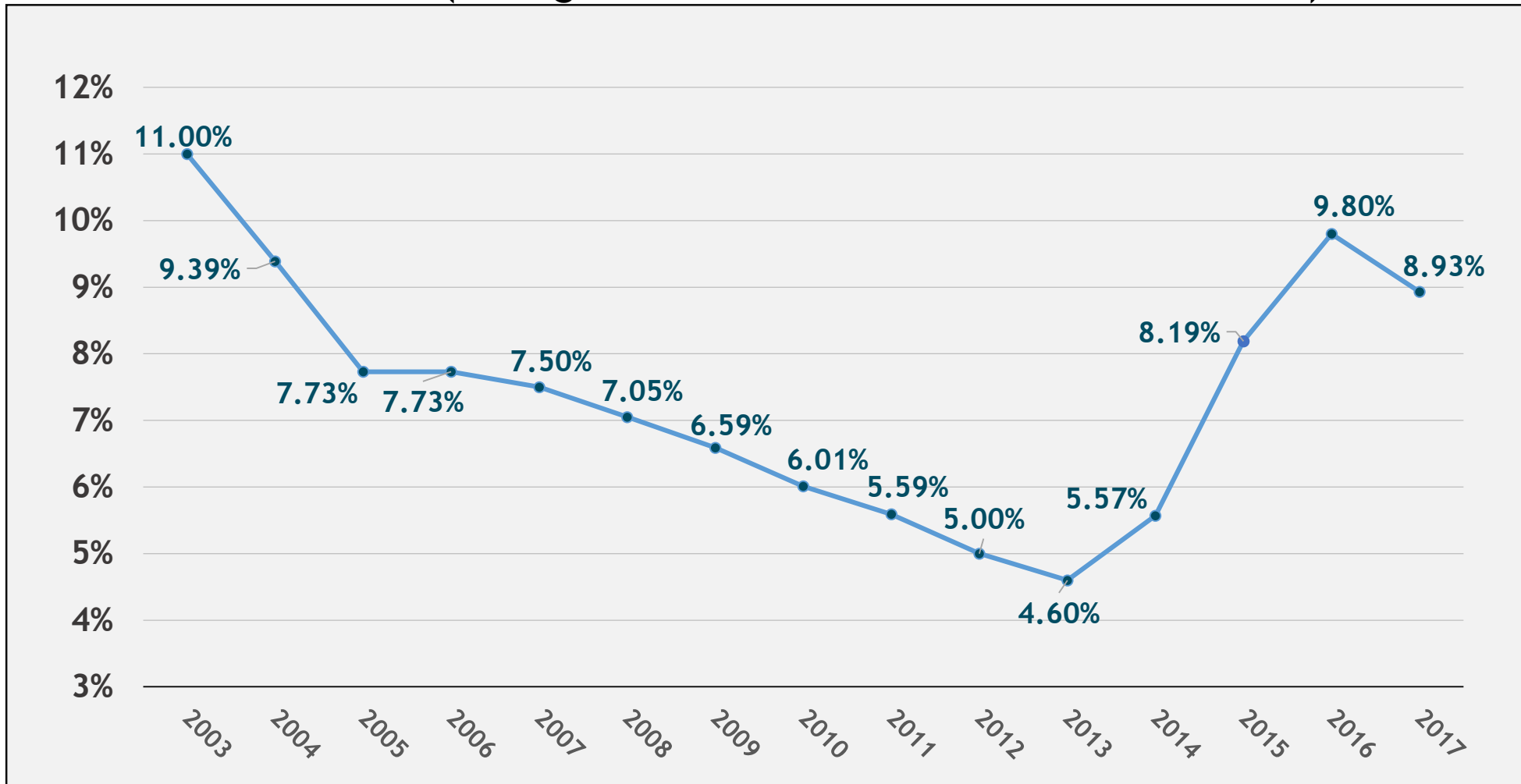




What is the role of the regulator?

# Perceived Risk

WACC - (Average for Transmission Investments - After Tax)

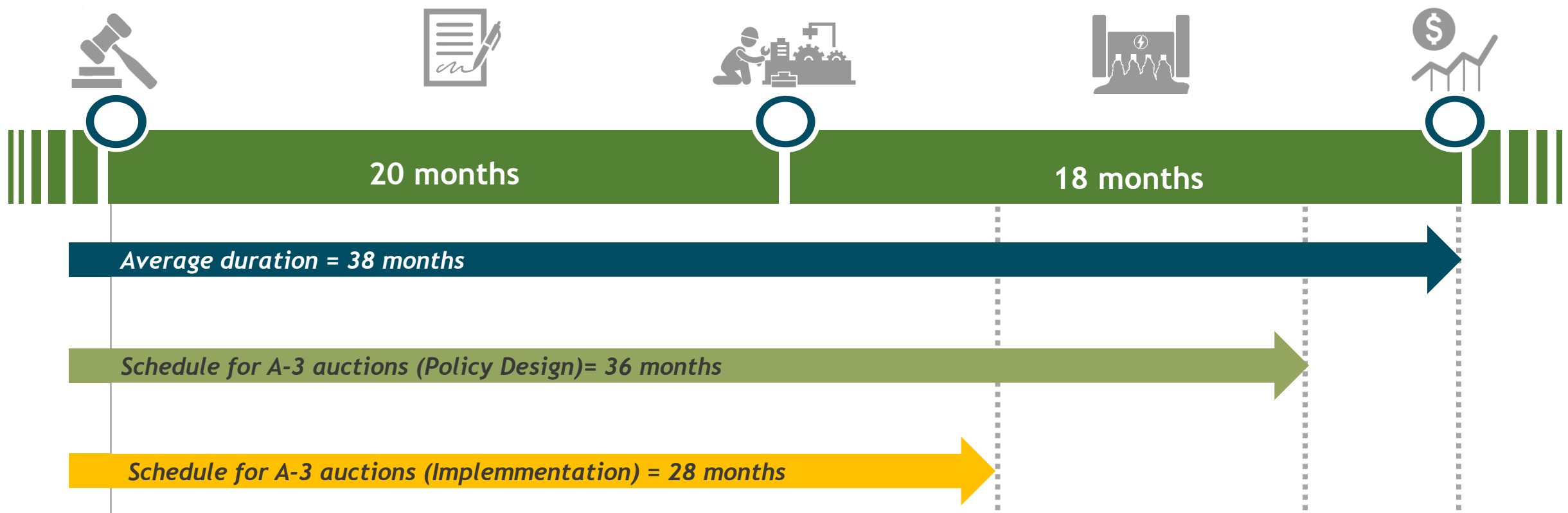




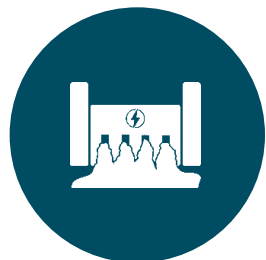


**Example: Construction delay on wind power plants**

# How can we deal with it?



# Investments for the next 10 years



**HYDRO - 6893 MW**



**BIOMASS  
4052 MW**



**SOLAR  
9641 MW**



**NUCLEAR 1400 MW  
FOSSIL 18751 MW**



**WIND  
18541 MW**

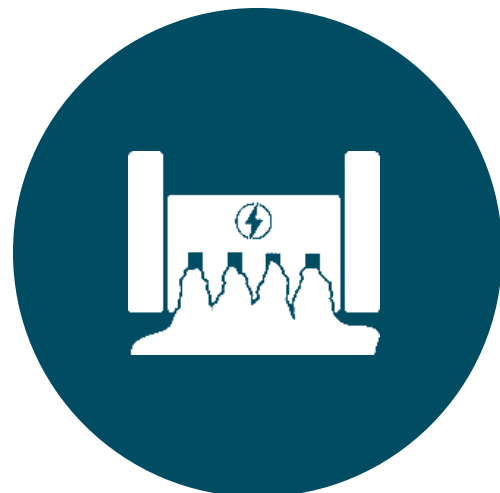


**TRANSMISSION  
47000 km**

Estimated Investments - 2017 ~2026	
Generation	<b>R\$ 242 bi</b>
Transmission	<b>R\$ 119 bi</b>

Exchange Rate:  
1 USD = 3.37 BRL  
1 EUR = 4.14 BRL

# Results from our last auction



**HYDRO**  
42 MW  
R\$ 198 MWh



**BIOMASS**  
62 MW  
R\$ 199 MWh



**WIND**  
58 MW  
R\$ 68 MWh



**SOLAR**  
1032 MW  
R\$ 118 MWh

Exchange Rate:  
1 USD = 3.37 BRL  
1 EUR = 4.14 BRL



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**Thank You!**

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