Ministry of Mines and Energy

Minister Bento Albuquerque

MINISTÉRIO DE MINAS E ENERGIA

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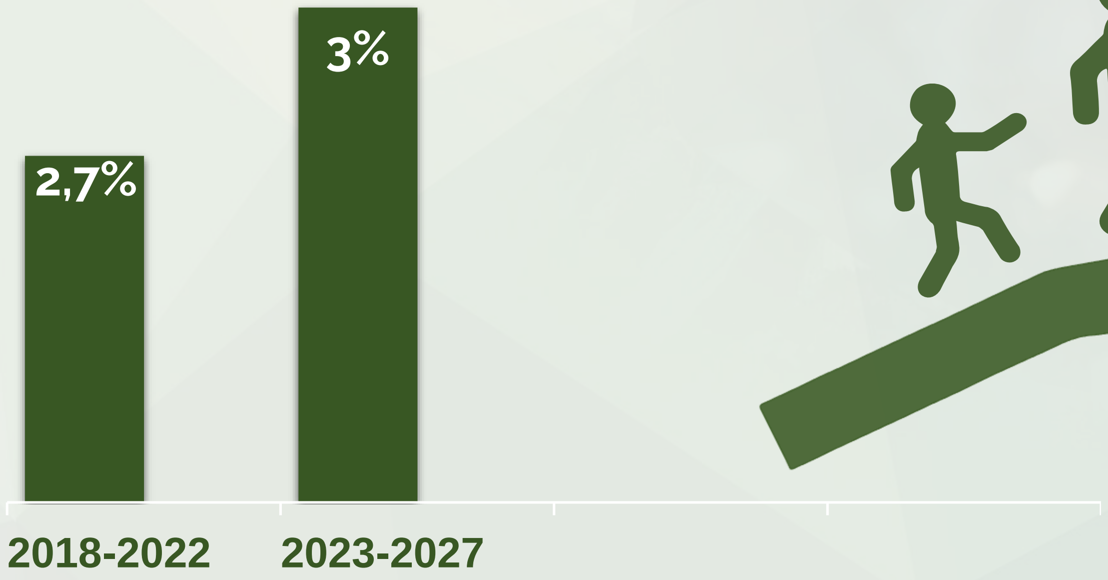
GOVERNO FEDERAL

Agenda

- Importance of the Brazilian Energy Sector
- Characteristics of the Brazilian Energy Matrix
- Governance
    - Pillars of the Energy Policy
    - Competences
- Oil, Natural Gas & Biofuels
- Geology, Mining and Mineral Transformation
- Electric Energy
- Auctions

Importance of the Brazilian Energy Sector

GDP Projections



Immediate consequence of the **ECONOMIC GROWTH** is the increase in **ENERGY CONSUMPTION**

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(Source: IBGE and EPE, PDE 2018)

Importance of the Brazilian Energy Sector

Sectorial Investments

USD 377 Billion
in oil, gas and biofuels

Until 2027

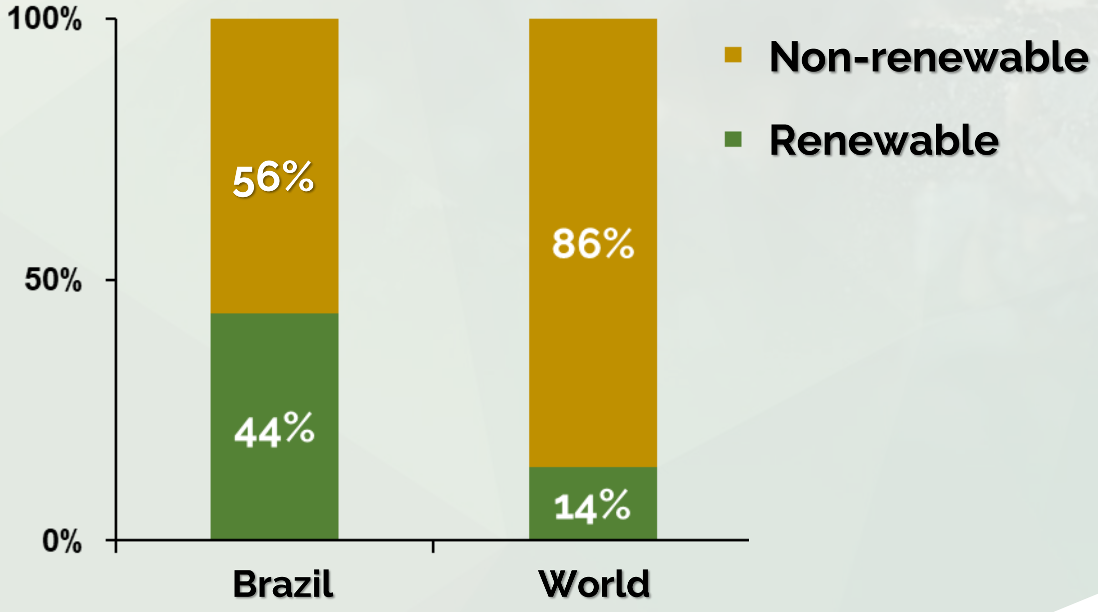
USD 100 billion
in electric power

USD 20 billion
in mining until **2022**

(Source: EPE, PDE 2018 / Ministry of Economy 2018, IBRAM)
US$ = aprox 3.9 BRL (28/03/19)

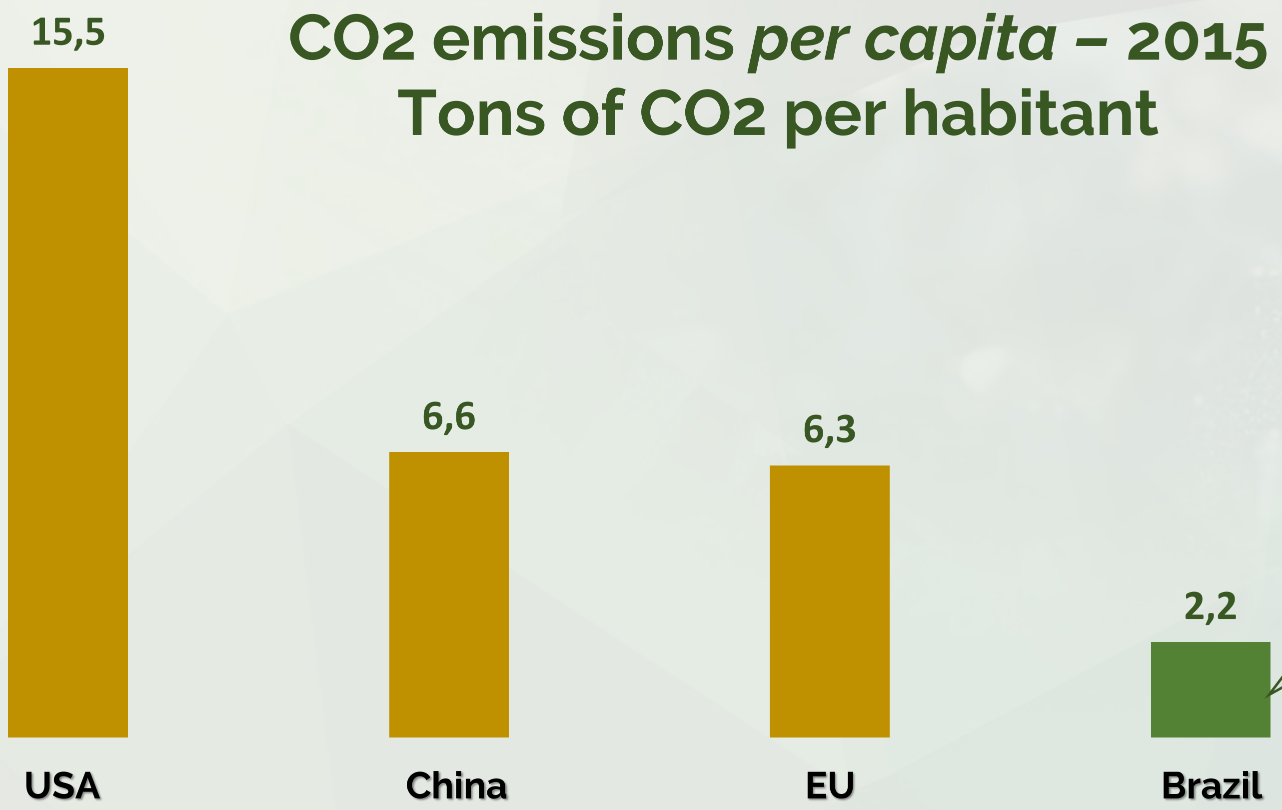
Characteristics of the Brazilian Energy Matrix

- ✓ Brazil has one of the **cleanest energy matrixes in the world**
- ✓ **In 2027**, the renewable portion of the energy supply will be at **48%**



(Source: EPE, 2018)

Characteristics of the Brazilian Energy Matrix



Brazil's **energy supply** can keep pace with expected **economic growth** without compromising **environmental sustainability**

(Fonte: EPE, 2018)

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Governance

Pillars of the Energy Policy

- Governance
- Regulatory and Legal Certainty
- Predictability
- Respect contracts
- Guaranteed Receivable

Governance

Competences

- Planning and execution of the mines and energy sectors policies
- Fostering sustainability and economic, social and environmental development
- Incentive to the development and use of new technologies
- Search for the structural and conjuncture balance of the system

OIL, NATURAL GAS AND BIOFUELS

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TRANSFER OF RIGHTS SURPLUS OPPORTUNITIES

Double
actual reserves
(**20** Billlions barris)

USD
250 billion
Tax revenues
35 years

2
Million bpd*
(production peak)

~17
FPSO

*Barrels per day

(Source: ANP, 2018 - transição)

- ✓ Between 2017 and 2040, Brazil will account for **23%** oil production increased in world, being among the **5 largest producers in the world**
- ✓ By 2030, Brazil will **double** natural gas production capacity from **112 to 220 million m^3 / day**

Oil and gas sector accounts for 13% of the Brazilian GDP

(Source: Abespetro, 2019)

NATURAL GAS

Brazil: reality x expectations

	Brazil
Transport Grid (thousand km)	9.4
Gas participation in the matrix (%)	12.4
Territorial extension (million km2)	8.5

- ✓ Continental dimensions with **incipient infrastructure**
- ✓ Gas market concentrated on **supply and demand**
- ✓ ***Increase natural gas supply*** *by up to 70% by 2027*
- ✓ Invest more than **USD 12,5** Billion by 2030

(Source: MME, 2019)

(Source: MME e IEA, 2018)

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NEW NATURAL GAS MARKET

Objective:

Promote competition in the market through legal and regulatory frameworks improvement by creating a favorable environment for investments.

Expected results

- Enable the use of **pre-salt natural gas**
- Increase **competitiveness and reduce the price** of natural gas
- **Increase market opening**
- **Attract investments** in the chain of Exploration and Production of natural gas
- **Increase integration** between natural gas and power sector

GEOLOGY, MINING AND MINERAL TRANSFORMATION

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OVERVIEW

50

Number of mineral commodities with known reserves

9.415

Number of active mines (0.5% of national territory)

2,7 mi

Direct and indirect jobs

4%

Brazilian mining production in relation to GDP

In 2018...

... there was a surplus of **USD 22,9** billion in the mineral foreign trade

... exports totaled **USD 49,3** billion

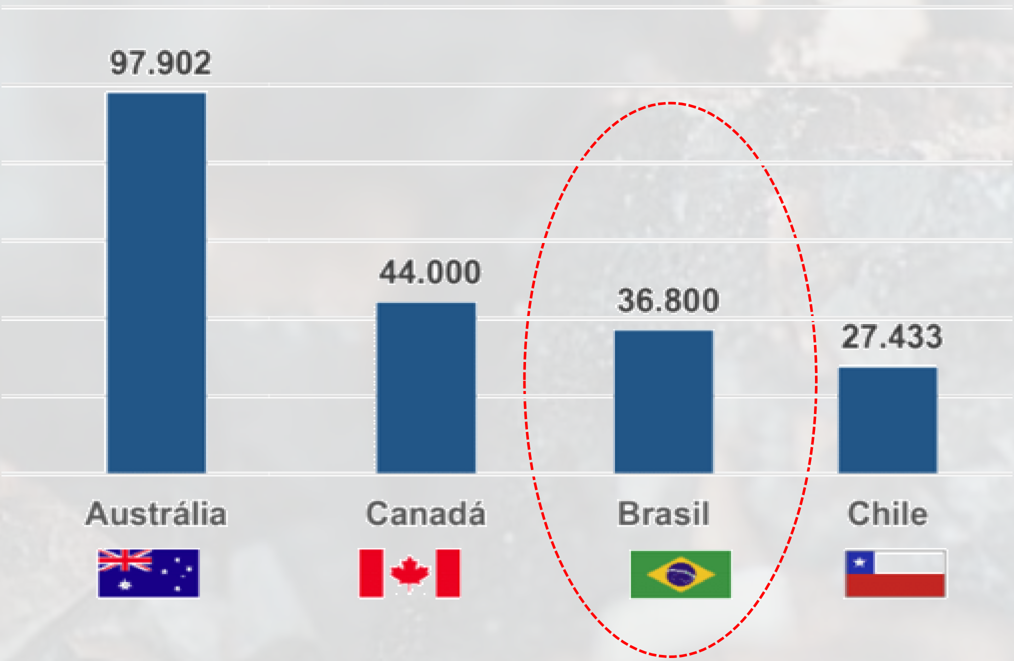
20.6% of Brazilian exports

... and beyond

Expand the **attractiveness** of the mineral industry

OVERVIEW

2017 – Brazil – 3rd Largest Value of Mineral Production in the World (Millions of US $)



(Source: ADIMB, 2018 - transition)

- ✓ **World Bank** estimates show **increased demand** for **mineral** raw materials to enable the transition to **low-carbon economies**

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ELECTRIC ENERGY

OVERVIEW

164 GW

Installed
Generation
Capacity

145,5 Thousand Km

Transmission Lines

83,3 Mi

Number of
consumer
units

USD 100 Bi

Required
Investments
until 2027

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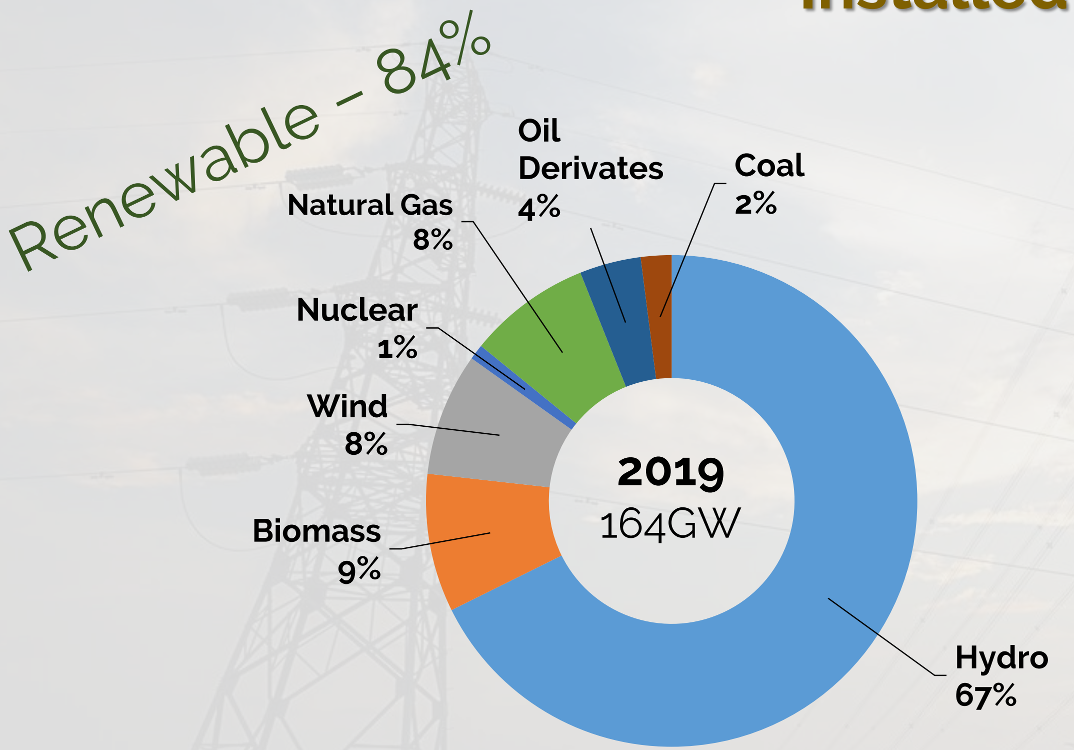
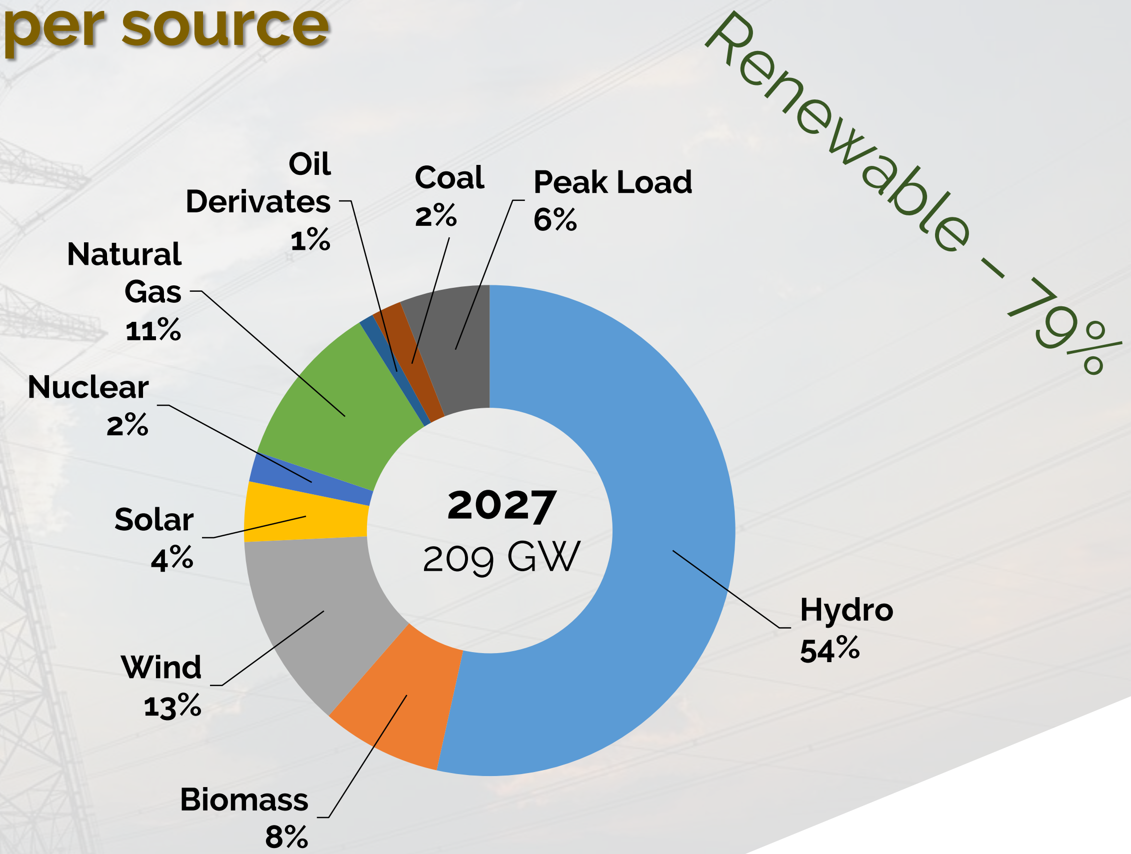
(Source: EPE, 2018)

Brazilian Electric Matrix

Centralized Generation - SIN

Installed Capacity per source





Brazilian commitments to the United Nations

Reduce greenhouse gas emissions from 2005 levels by 37% by 2025 and an indication of 43% by 2030

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(Source: EPE, 2018)

AUCTIONS

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AUCTIONS CALENDAR 2019

Oil and Gas, Mining and Energy

OFERTA PERMANENTE Brasil
CONCESSÕES DE PETRÓLEO E GÁS
Wave 2
1st Semester

A-4
27/06

Areas Offer
ANM
June

A-6
26/09

28/10
EXCEDENTE DA CESSÃO ONEROSA Brasil
PARTILHA DA PRODUÇÃO

PRÉ-SAL Brasil 6
PARTILHA DA PRODUÇÃO
01/11

06/12
A-1
A-2

Transmission Auction
19/12

RODADA Brasil 16
CONCESSÕES DE PETRÓLEO E GÁS
2nd Semester
CPRM
Serviço Geológico do Brasil
Areas Auction
Project
Palmeirópolis (TO)

AUCTIONS CALENDAR

Oil and Gas

OFERTA PERMANENTE Brasil
CONCESSÕES DE PETRÓLEO E GÁS
Wave 2

1st Semester

PRÉ-SAL Brasil 6
PARTILHA DA PRODUÇÃO

28/10

01/11

RODADA Brasil 16
CONCESSÕES DE PETRÓLEO E GÁS

2nd Semester

2019

EXCEDENTE DA CESSÃO ONEROSA Brasil
PARTILHA DA PRODUÇÃO

RODADA Brasil 17
CONCESSÕES DE PETRÓLEO E GÁS

PRÉ-SAL Brasil 7
PARTILHA DA PRODUÇÃO

2020

RODADA Brasil 18
CONCESSÕES DE PETRÓLEO E GÁS

PRÉ-SAL Brasil 8
PARTILHA DA PRODUÇÃO

2021

AUCTIONS CALENDAR

Mining

Areas Auction

Project

Palmeirópolis (TO)

CPRM
Serviço Geológico do Brasil

Areas Offer

ANM

June

2nd Semester

2019

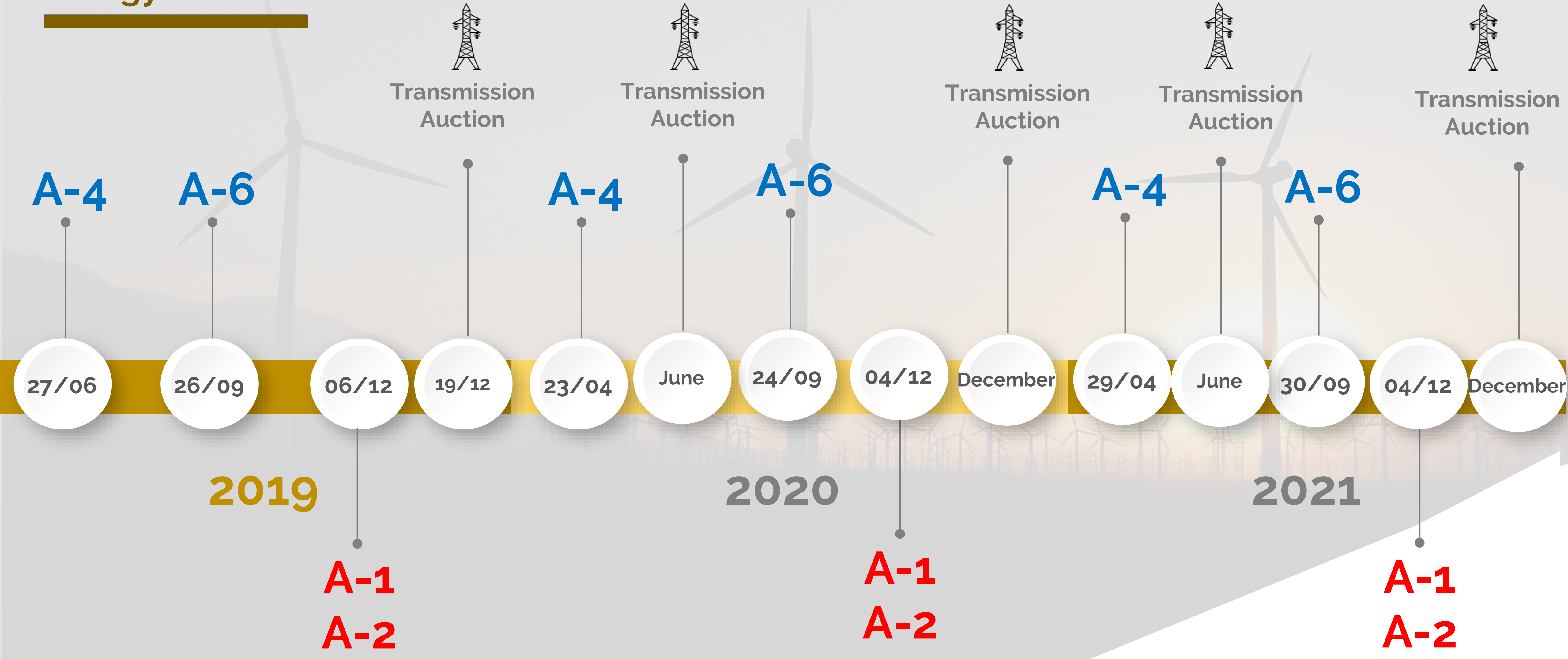
AUCTIONS CALENDAR

Energy

LEGEND:

New Energy Auction

Existing Energy Auction



Thank you!

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