



MINISTRY OF MINES AND ENERGY

BENTO ALBUQUERQUE | MINISTER OF MINES AND ENERGY

INDIA | NEW DELHI, JANUARY 23, 2020

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The recipient of this document is entitled to appropriate treatment and interpretation.



BRAZIL & INDIA: COMPLEMENTARITIES

MINING

80 mineral commodities

MINING

95 mineral commodities

ELECTRICITY

Installed capacity in expansion (44%)

ENERGY

Indian invests in transmission lines in Brazil

BIOFUELS

The largest producer of sugarcane ethanol

1ST

Largest sugar industry

1,1 MILLION
BARRELS/DAY

Brazil became a net oil exporter and will be 5th largest producer by 2029

3RD

largest oil & gas consumer market (2019) imports more than 80% of its demand.

9TH

Largest economy (GDP)

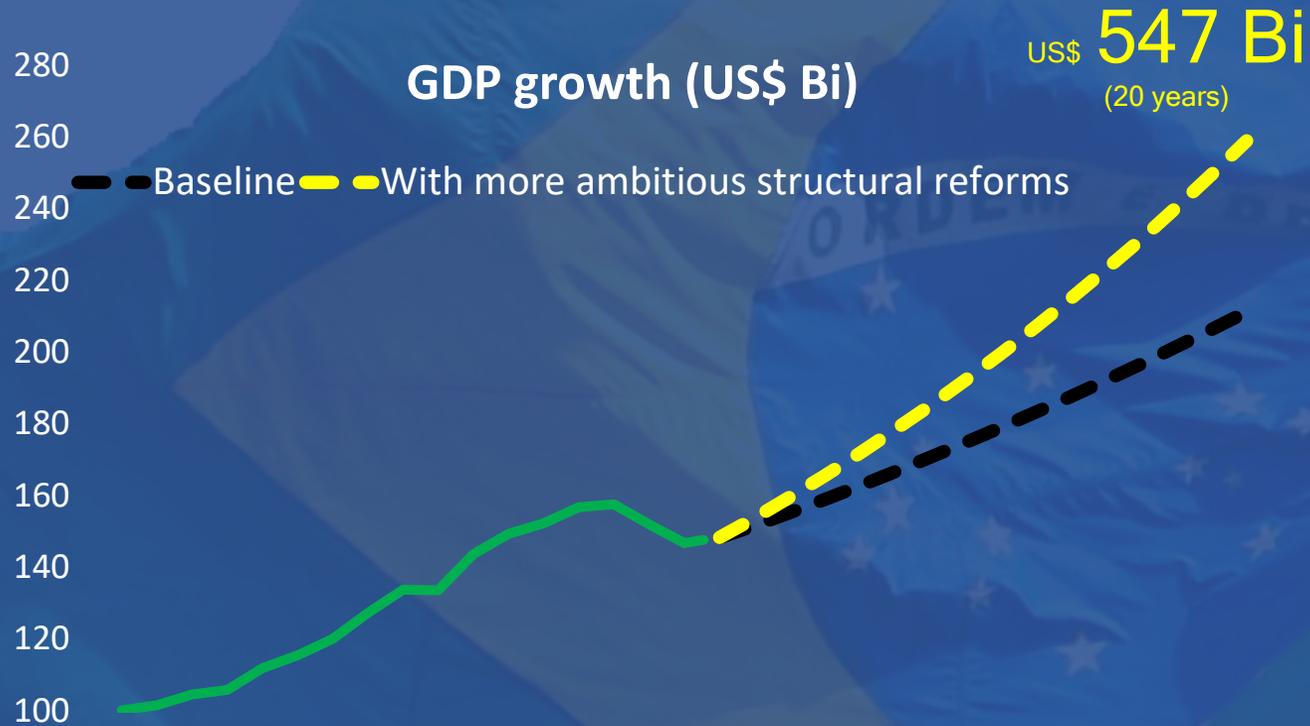
7TH

Largest economy (GDP)

(Source: OECD, 2019; ME/SPE/IBGE, 2020)



BRAZIL ON A POSITIVE GROWTH PATH



Economic reforms will allow for **investments** and will enable a return of **confidence** and job generation.



CONCRETE DELIVERABLES IN 2019

Oil & Gas
open market agenda

+240 US\$ BI

Oil and Gas investments (30 years)

Energy
Modernization program

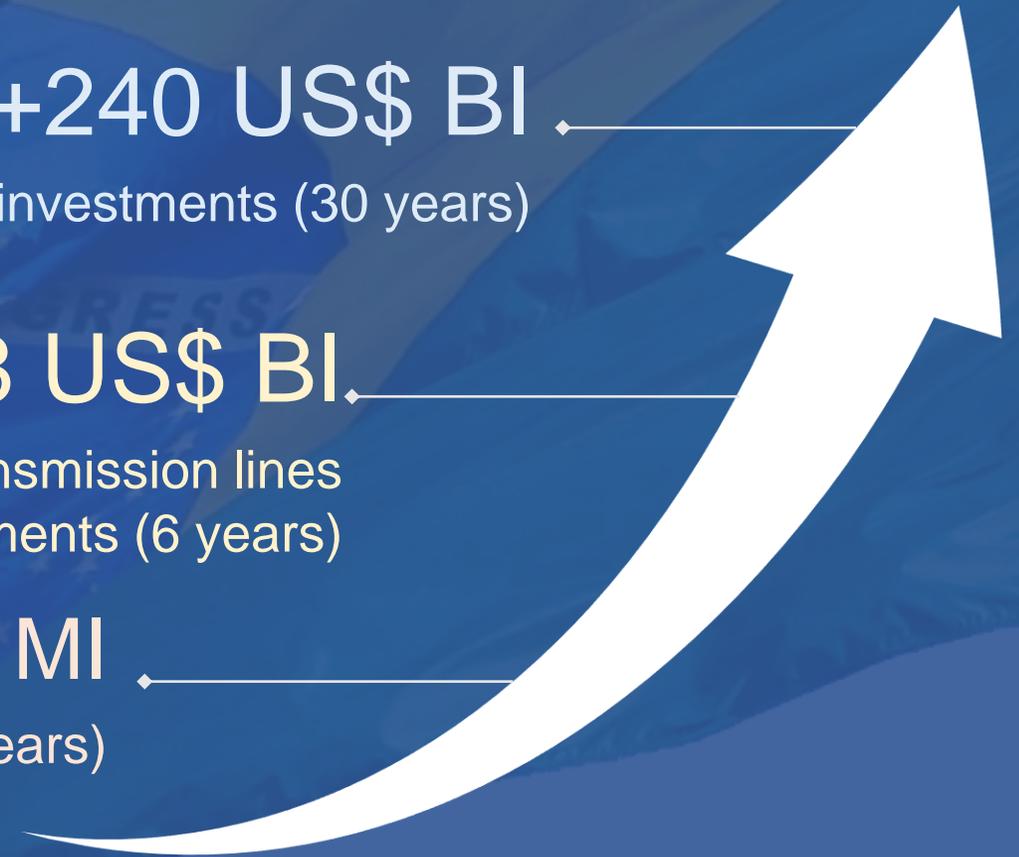
5,8 US\$ BI

Power generation and Transmission lines investments (6 years)

Mining
Improving the governance

US\$ 61 MI

Mining investments (10 years)





THE ROAD AHEAD

Average Electricity
consumption

3,8%
(2020-2029)

GDP
growth

2.8%

3%

2020-2024

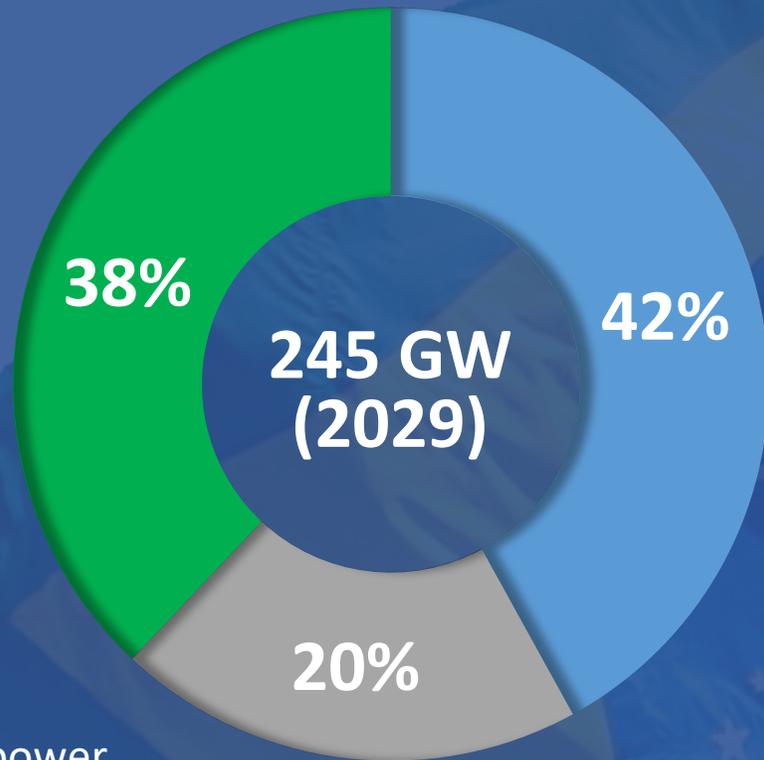
2025-2029



Energy demand will
continue to grow.



WHERE WE'LL BE IN THE FUTURE



■ Hidropower

■ Thermal plants (Coal, Gas, Oil and Nuclear)

■ Renewable (Small Hydro Plants, Biomass, Wind and Solar)

48 %

Share of renewables in our energy matrix (2029)

By 2029, renewable sources will increase from **34GW** to **83 GW** in our installed capacity.



OIL, NATURAL GAS & BIOFUELS



Brazil has the **highest pre-salt well productivity** in the world



Brazil focus on **open market** agenda



By 2030, Brazil will have **doubled** its natural gas production capacity



By 2030, Brazil will be among the **5 largest** exporters in the world



BRAZILIAN ENERGY TRANSITION

(1970 -2020)



RenovaBio

**“THE BRAZILIAN
CARBON CAPTURE MACHINE”**

- ✓ Proálcool (1975)
- ✓ Flexible Vehicles(2003)
- ✓ Ethanol E27 (27%)
- Biodiesel:
 - de B2 a B10 (2008-2018)
 - de B11 a B15 (2019-2023)
- RenovaBio (2020)

(Source: MME, 2019, Petrobras, 2019)



BRAZIL IS OPENING ITS MARKET

Brazilian Government Program to build an **open, dynamic and competitive** natural gas market

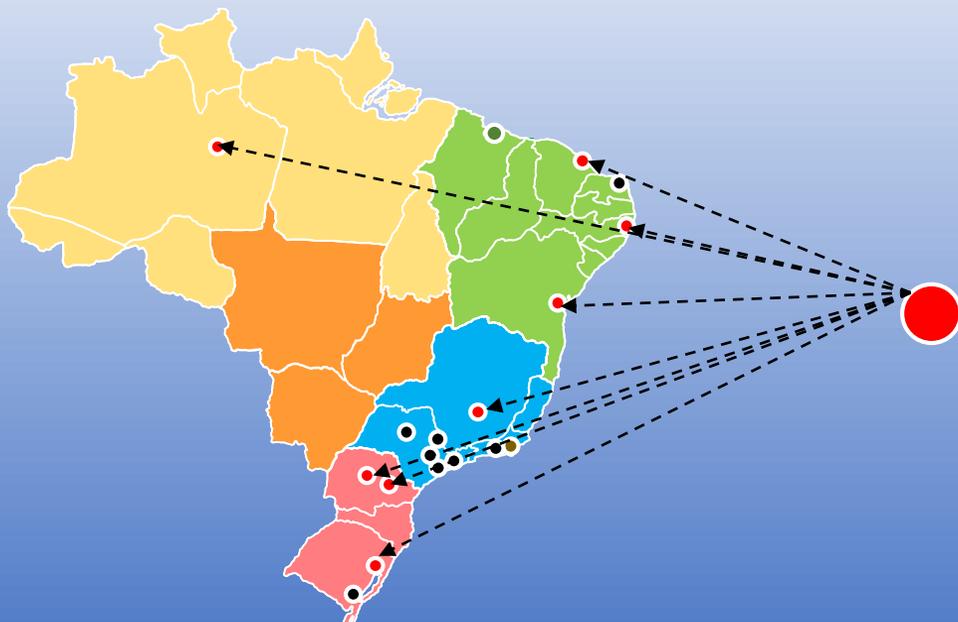


Development of competition

Integration of the gas to power and to industrial markets

Conciliate local* and federal regulations (27 States)*

Reduce tax barriers



Petrobras' refineries divestment projects (2021): eight active refineries, total capacity of 1.1 million bpd (50% of Brazil)



MODERNIZING OUR ENERGY SECTOR

Open energy market for all consumers

Efficient cost and risk allocation

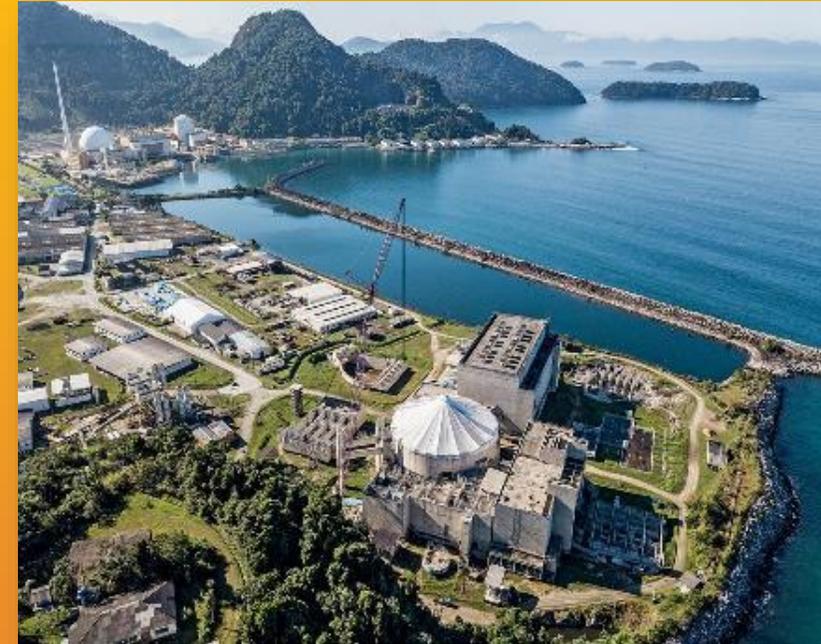
System expansion must
guarantee safety and
reliability

Regulatory rules prepared for new
technologies



BRAZILIAN NUCLEAR POLICY

- Uranium reserves (7th in the world)
- Full cycle mastery;
- Low carbon emission;
- 90% of energy availability.



(Source: MME, 2019; Eletrobras & Eletronuclear, 2019)



THE KEY ROLE OF MINING

80

Number of mineral commodities with known reserves

0.6%

Brazilian mining in rights in exploration (9400 number of active mines)



4%

Brazilian mining production in relation to GDP

21%

Brazilian exports

- ✓ Regulatory capacity;
- ✓ Digital mining: faster assessment process (309 to 35 days);
- ✓ Under way: the **flexibilization** of the legal framework to allow PPP for Uranium;
- ✓ Promoting auctions



- ✓ THE FUTURE IS BIO, IT IS OIL, IT IS GAS, IT IS NUCLEAR, IT IS WIND & SOLAR, IT IS COAL.
- ✓ IT IS DIVERSIFICATION.
- ✓ YOU'RE VERY WELCOME TO INVEST IN BRAZIL.



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