

Nuclear Energy in the National Energy Plan 2050

Ministry of Mines and Energy

Economic Advice

Brasília, November 2020

MINISTÉRIO DE
MINAS E ENERGIA



PÁTRIA AMADA
BRASIL
GOVERNO FEDERAL

Long-Term Strategies

Long-Term Strategies *Energy sector expansion*

Design

Definition of a recommendation set and guidelines to be followed

Tool: PNE 2050 Report

Implementation

Develop a set of coordinated actions that enable the strategy implementation

Tool: Action Plan

Monitoring

Monitoring strategy effects and outcomes
Tool: Strategic Action Monitoring Plan

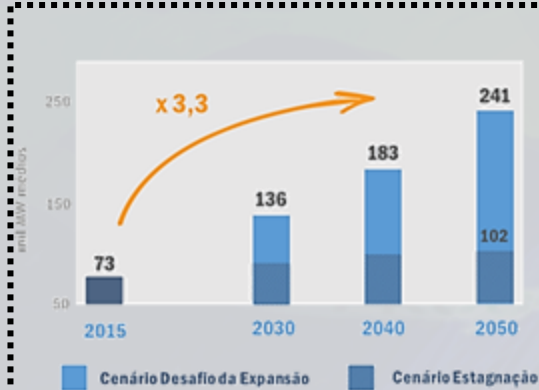
2009	186 milhões
2010	196 milhões
2015	205 milhões
2030	224 milhões
2040	228 milhões
2050	226 milhões

233 million
inhabitants
by 2050

2009	45 milhões
2010	50 milhões
2015	65 milhões
2030	82 milhões
2040	91 milhões
2050	98 milhões

98 millions
dwellings
by 2050

Electricity Consumption Supply



x3,3

It is the number of times that the country's electricity potential consumption can reach in relation to the base year

Includes network consumption, self-production, decentralized generation and is calculated before energy efficiency gains

Electricity Demand



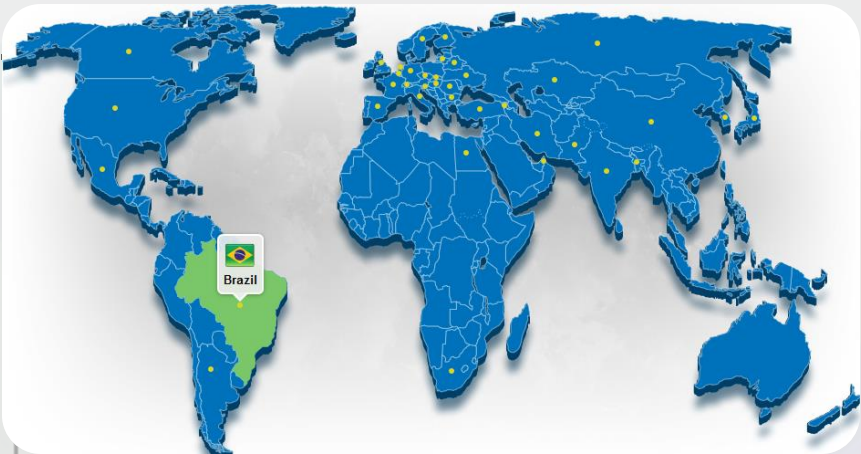
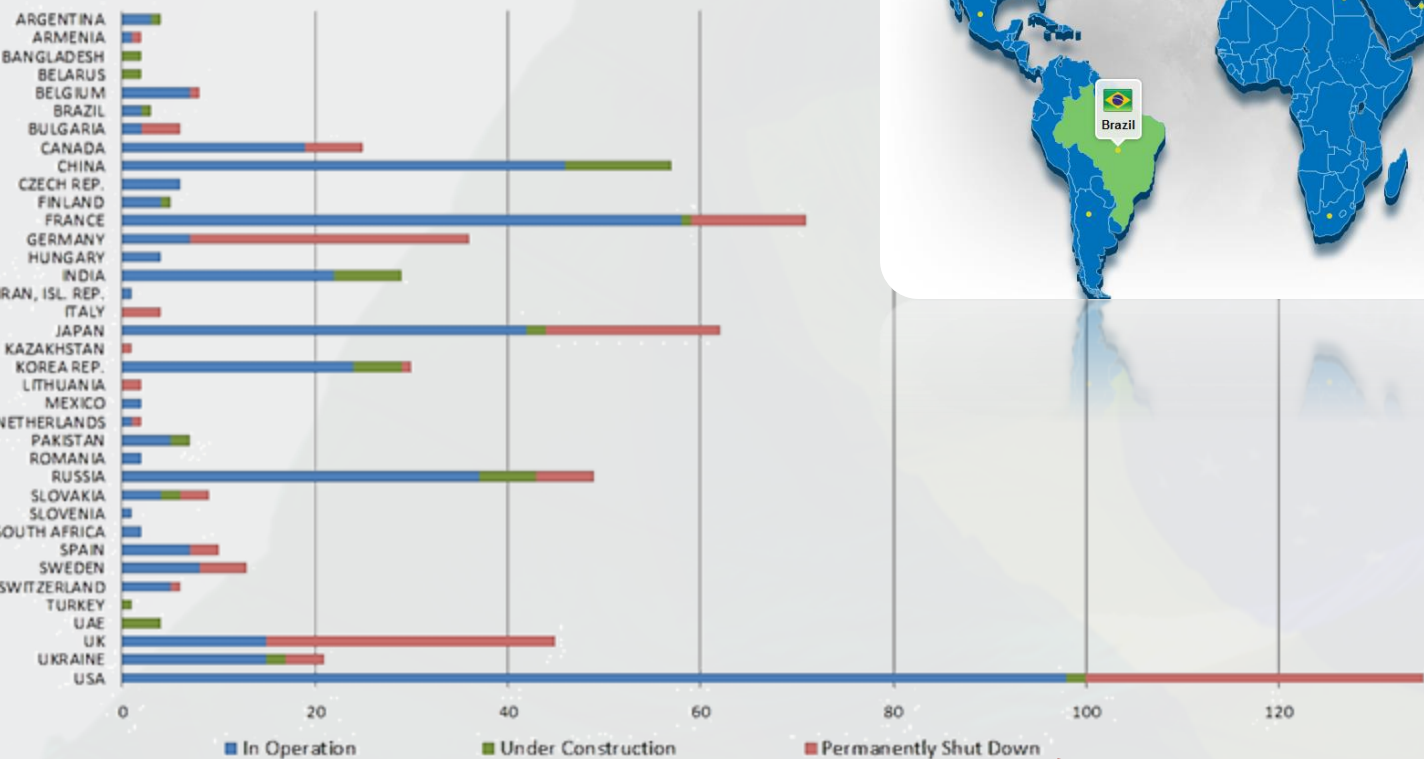
x2,5

It is the number of times the electricity demand -can reach in relation to the base year

Nuclear Energy - World Overview 2020

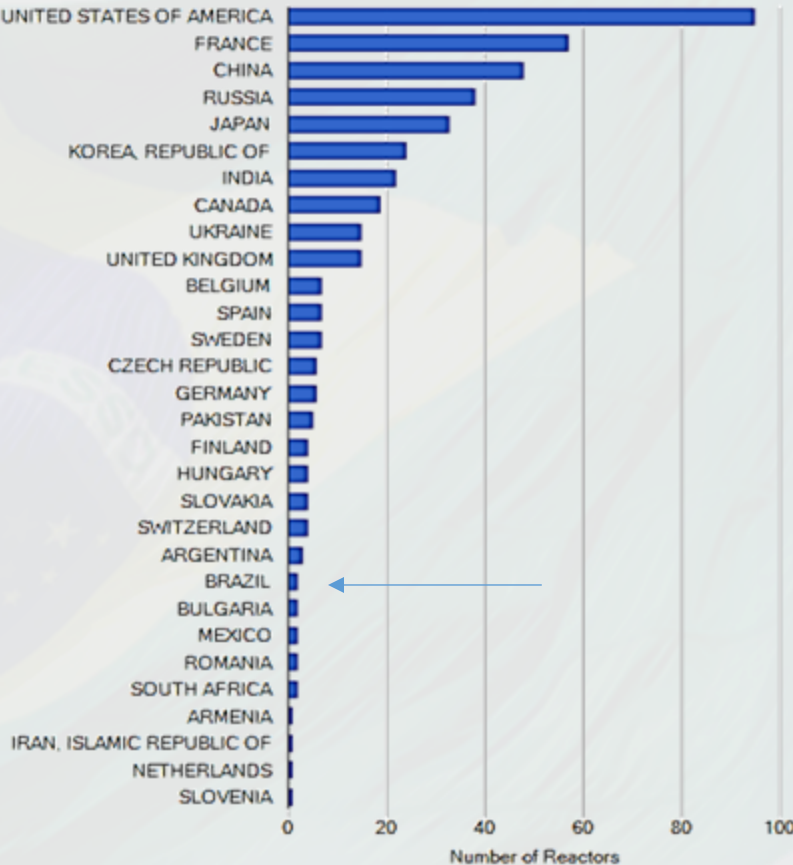
Nuclear Energy

Reactors under construction and in operation




Nuclear Energy

Países com Reatores in operation



 **441** 
Nuclear Reactors in
operation in June 2020

 **54** 
Nuclear Reactors in
construction in June
2020

 **186** 
Nuclear Reactors
decommissioned
until 2020

Source: Power Reactor Information System (PRIS) - IAEA. 22/6/2020 Available in: <https://pris.iaea.org/PRIS/home.aspx>

Nuclear Energy - Brazilian Nuclear Policy (PNB)



Nuclear Energy *Brazilian Nuclear Sector Axes*



Challenge For New Projects

- ✓ Project financing to a government monopoly;
 - ✓ Less dependence on the State to make it viable;
- ✓ Adequate financial equation - risk and return;
- ✓ Potential Gains from synergies;
- ✓ Competitive cost energy source according to its characteristic;
 - ✓ tax isonomy
 - ✓ sector charges isonomy

Source: PNE 2050

How to be competitive in a deregulated market?

Installed electricity generating Capacity

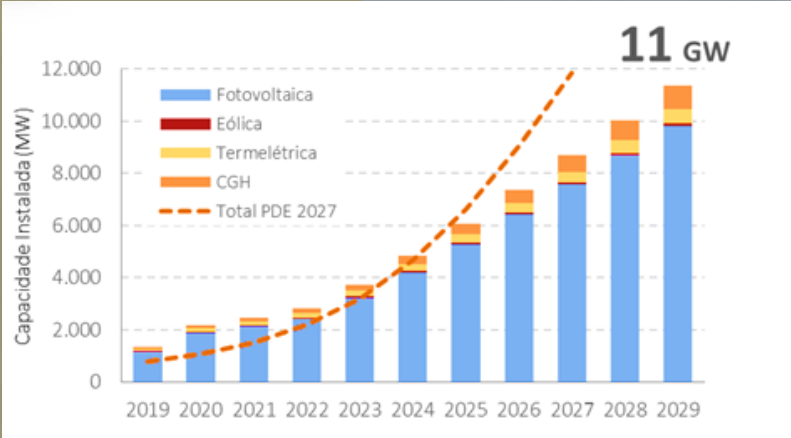
CENTRALIZED GENERATION

Renewable: 84%
2019

Renewable: 80%
2029



In Loco Generation (GW)



Thank You!



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