








BNDES and Climate Transition

September 2023



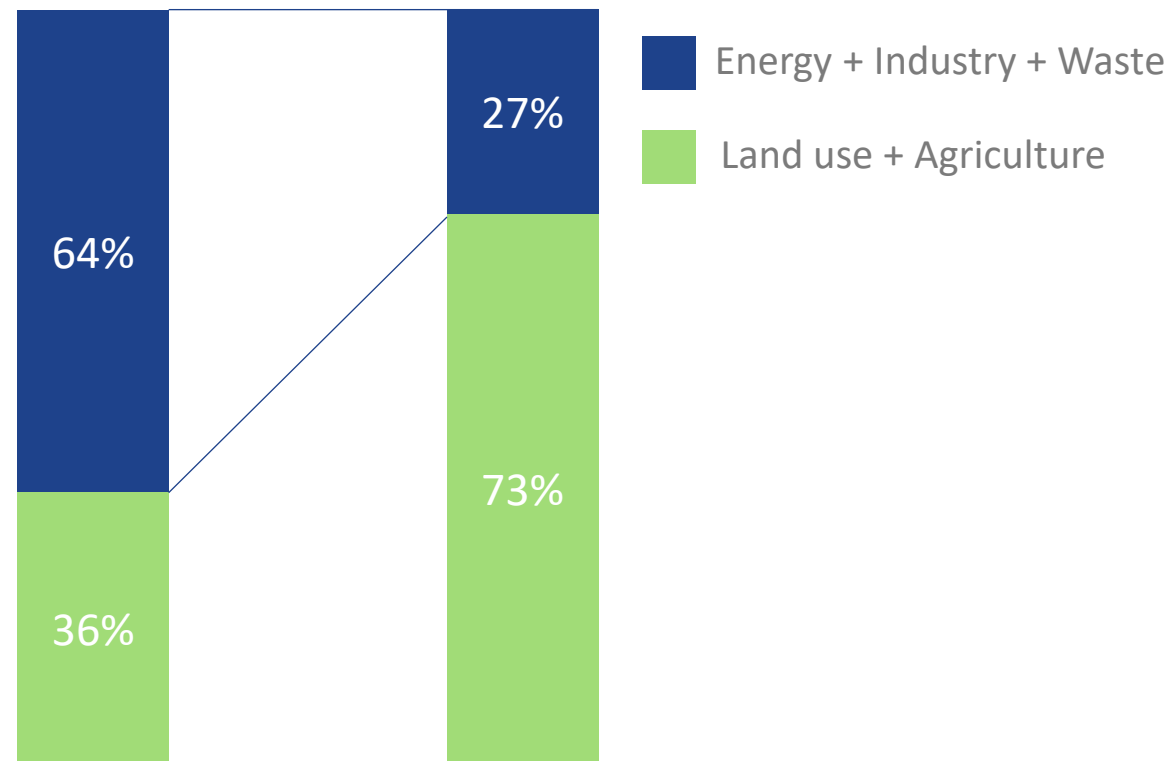
Brazil is the 5th largest global emitter, but history shows we can lead the transition and be the first to decarbonize

Largest Emitters Ranking 2021

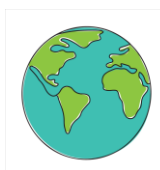
		Emissões de GEE (Bi tCO2e)	PIB Ranking
1	 China	14,53	# 2
2	 EUA	6,92	# 1
3	 Índia	3,77	# 5
4	 Rússia	3,40	# 11
5	 Brasil	2,41	# 12
6	 Indonésia	1,54	# 16
7	 Japão	1,26	# 3
Acumulado		33,83	

Fonte: Climate Trace / SEEG

Emissions' profile Brazil vs World



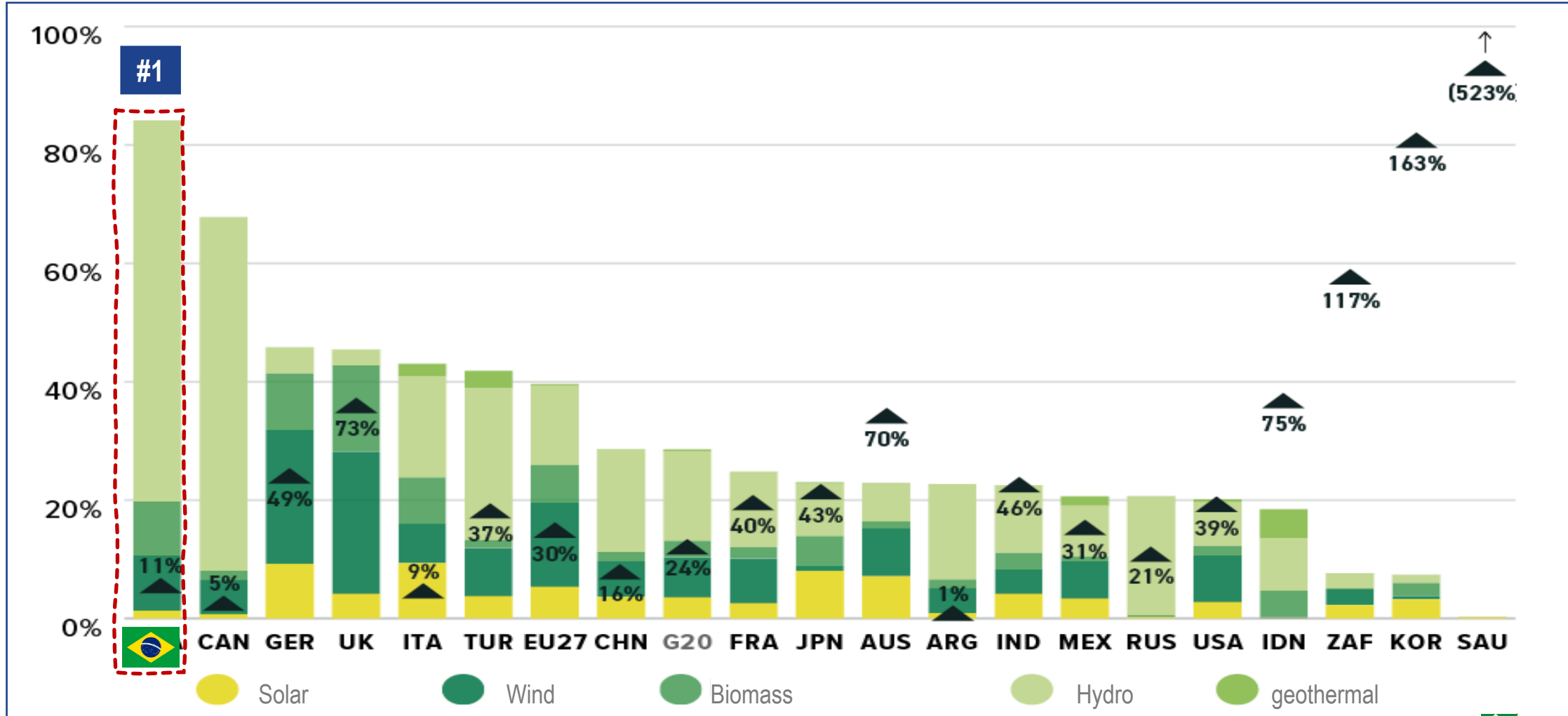
Global



Brasil

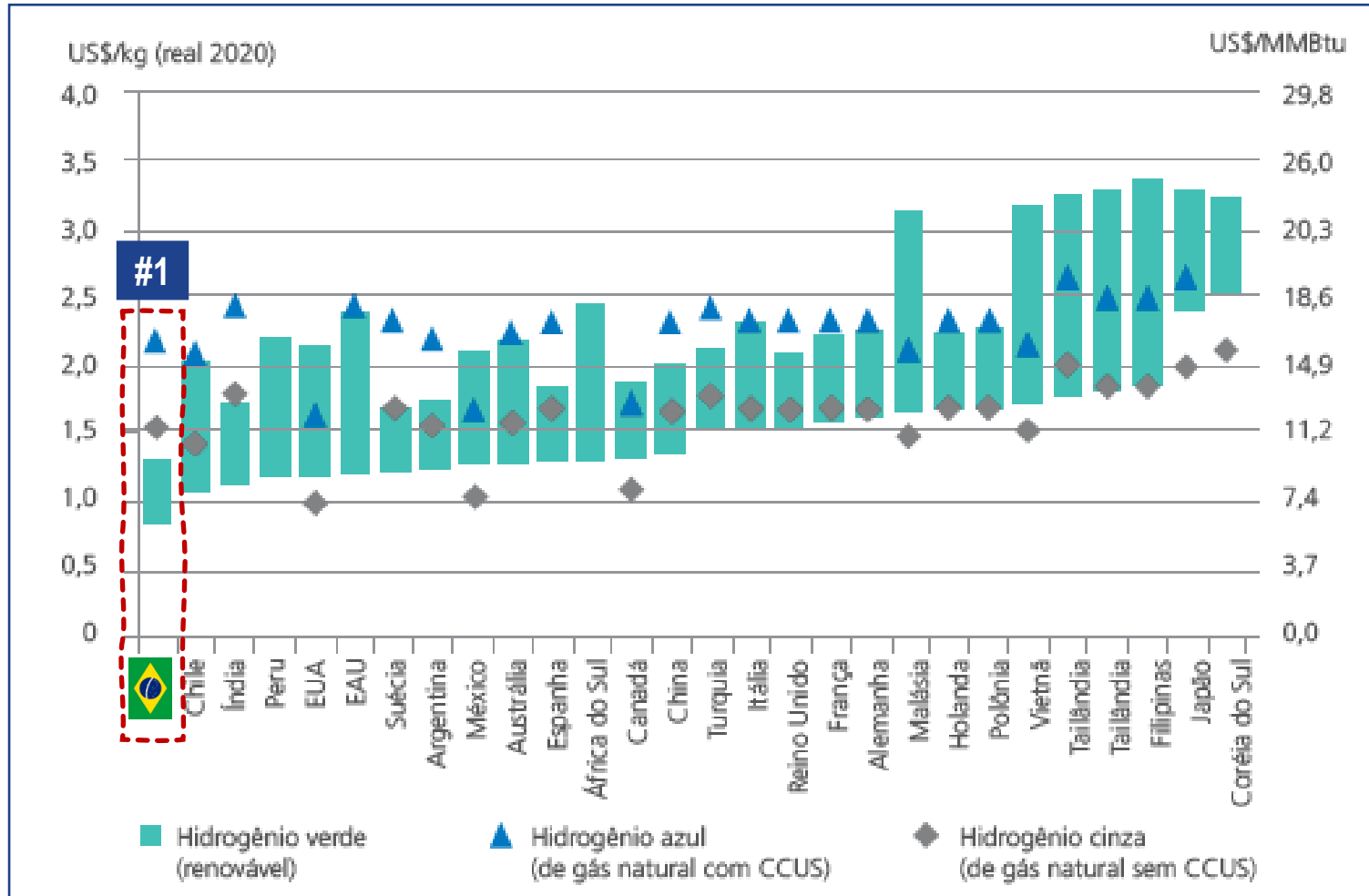


Brazil has the cleanest energy matrix among major economies (~80% vs. 29% G20 average): advantages for *H2 and Green* Neoindustrialization



Source: Climate Transparency Report, Enerdata , 2020

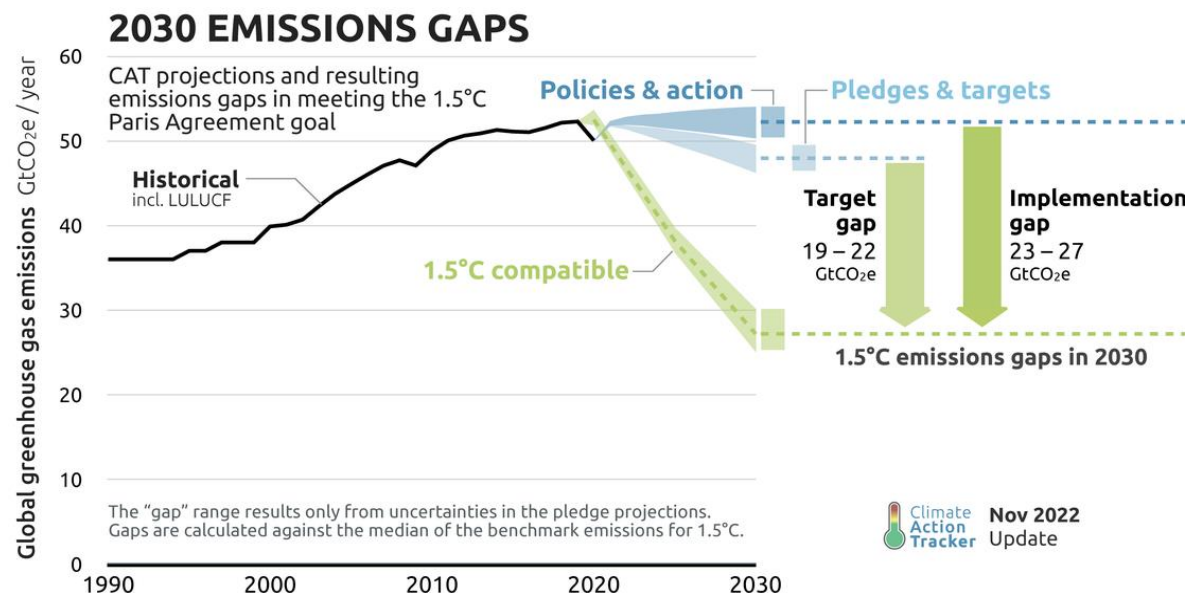
Our biofuel and renewable energy leadership enable Brazil to be a candidate leader in Green H2, a solution for *hard-to-abate sectors*



Low carbon Hydrogen offers a unique opportunity to attract investment in **FERTILIZERS production chains, GREEN STEEL AND CHEMISTRY**

Climate Scenarios show that current policies' efforts are not sufficient to keep temperature below 1,5° C

- Brazil has aggressive NDCs and the commitments of zero deforestation, our Metano Pledge, and green energy capabilities are key to support this effort



NDCs BRASIL

↓ 37% GHG by 2025 (~ 0,7 Gt ,
Base 2005)

↓ 50% GHG by 2030 (~ 0,85 Gt,
Base 2005)

Zero illegal deforestation by 2028

Carbon neutrality in 2050

Global Methane Pledge BRASIL

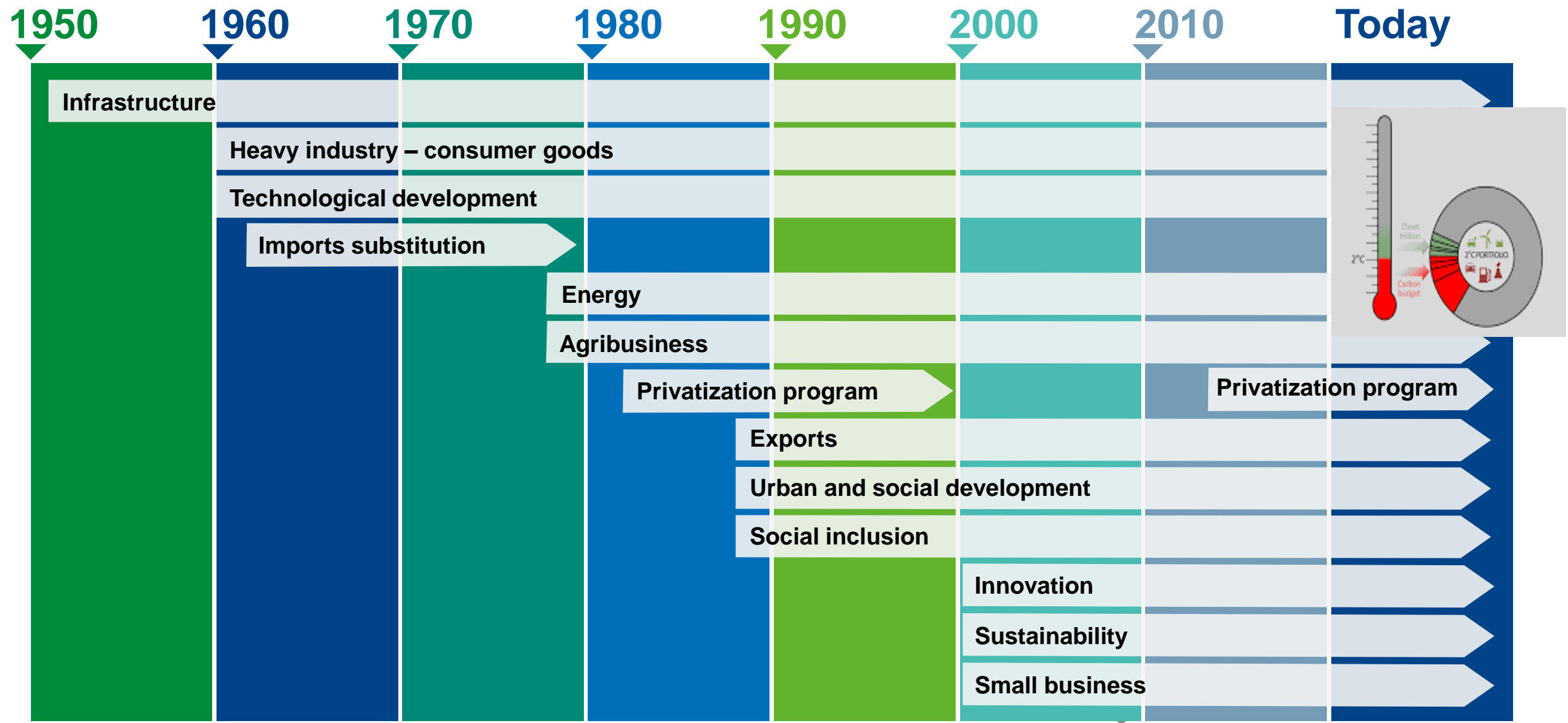
↓ 30% Methane
by 2030



BNDES has the tools and experience to support the transition with the volume and speed needed



BNDES new challenge: Keep our portfolio temperature aligned to 1.5 °C



Since 1952, BNDES has been the main actor for infrastructure and energy transition finance in Brazil

BRL 929bi & +1,900 projects

Financing infrastructure over the last 20 years

BRL 257 billion (2022)
52% of the total BNDES portfolio

Infrastructure Loan Portfolio, Transition Energy and Climate Change

BRL 42 billion (2022)
(43% of total disbursements)

Infrastructure Credit Disbursements, Transition Energy and Climate Change



79 GW financed by BNDES
(70% of the expansion of the electric matrix since 2000)



World's largest global financier of renewable energy (\$35bn)



BRL 20bn of credit contracted for Águas do Rio, the largest sanitation project in Brazil



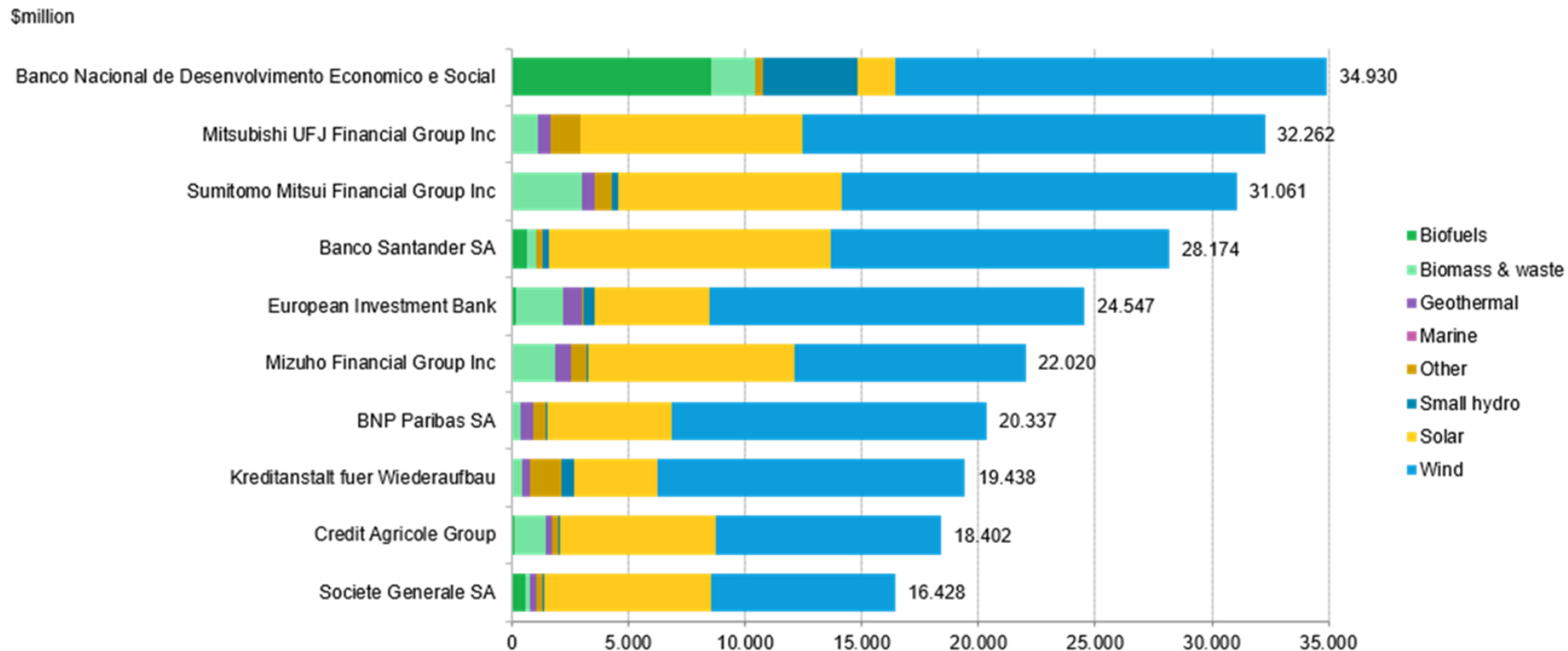
BRL 6.9 billion of credit contracted for PPP Metrô SP Line 6 (largest urban mobility project in Brazil)



25,000 km of highways financed (12% of the Brazilian paved network)

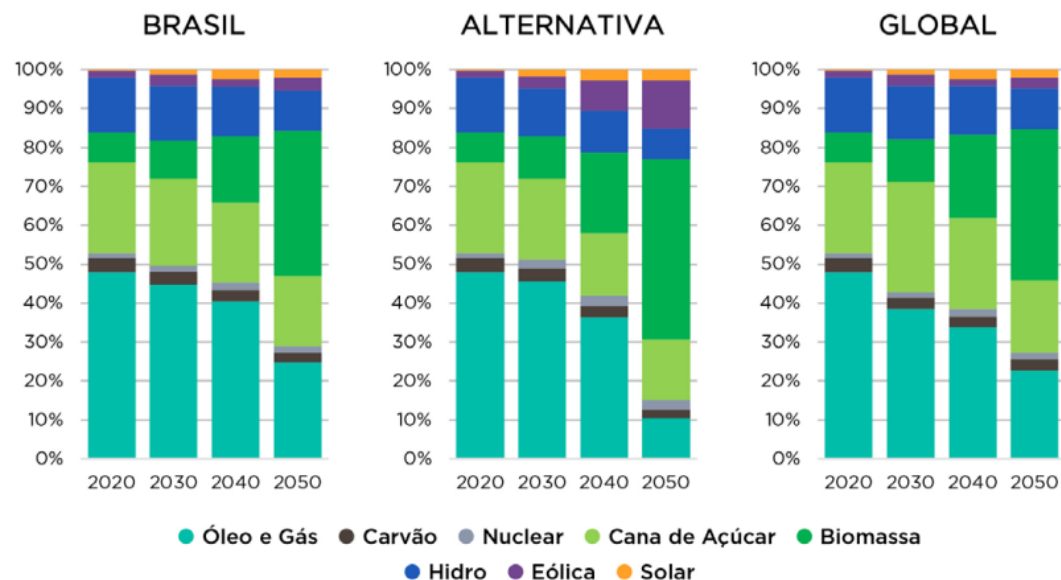
We are pioneers and leaders in Green Finance globally

- **ESG Rating A1+ (Moodys)**: BNDES positioned among the top 2% in the world
- **1st Brazilian Institution to issue Green Bonds** in the international market (**US\$ 1bn, in 2017**)
- **1st Financial Institution to issue Green Financial Bills** in the Brazilian market (**BRL 1bn, in 2020**)
- **Bloomberg/BNEF Global Banking Ranking (Largest Green Energy Finance Funding)**

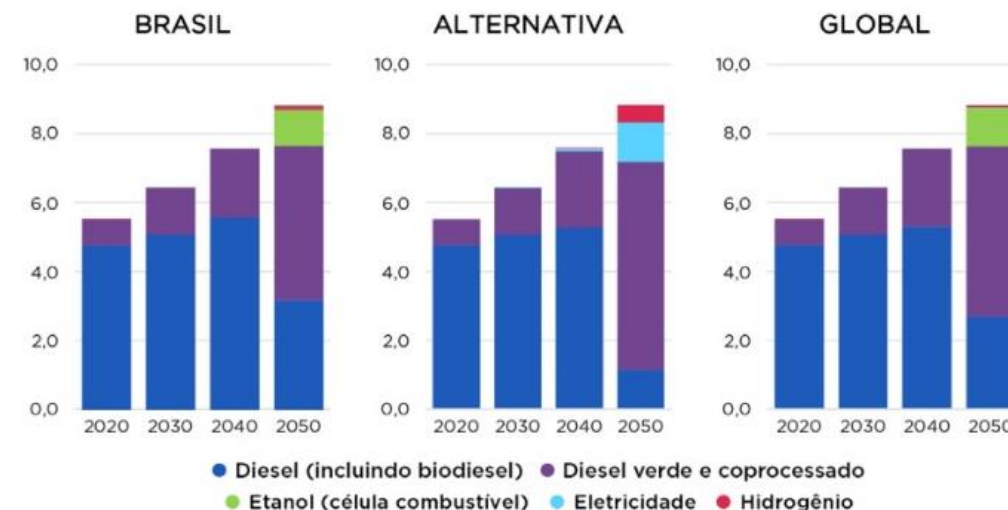


A Scenario-oriented transition plan combines short and long-term solutions

Energy Mix in Brazil – BR Energy Planning Scenarios 2050 (EPE)



Freight Transport Energy Consumption – BR Energy Planning Scenarios 2050 (EPE)



- **2030 Efforts** will rely on existing Technologies and energy efficiency efforts:
 - Biomass (Ethanol, Biodiesel)
 - Biogas and biomethane
 - Wind and Solar energy
- **Net Zero 2050** depends also on R&D and scaling-up new Technologies :
 - Low-carbon hydrogen
 - Green Diesel
 - Carbon Capture
 - SAF,
 - Offshore wind

BNDES and a Just Transition



Energy Transition



Clean Transport



Forests and Nature based solutions



Low-carbon reindustrialization



Waste and Adaptation



Low-carbon Agriculture



1,5°C Balance sheet alignment and Just Transition supporting carbon neutrality in 2050



Avoided Emmisions



Green Jobs



Financed Emissions



Low-carbon Reindustrialization



Resilience and Quality of Life

Carbon Market Strategy

Goal	Originate projects with potential Generation of carbon credit in order to promote carbon markets
Funding	Map eligible projects in our portfolio and support for credit generation and certification
Innovative Solutions	Thinking of new solutions such as collaterals or Other funding tools (credit, equity, second tier loans)

BNDES is part of:

- ILACC - Iniciativa para o Mercado de Carbono da América Latina e do Caribe
- BR VCM – Iniciativa Brasileira para o Mercado Voluntário de Carbono
- LAB CVM – GT Mercado de Carbono

Carbon Markets as an opportunity

Brazil :high potential to offer carbon credits and fund sustainable investment

- 58,5 % of its territory is still covered by native forests (SNIF)
- 63,5% of cattle áreas are degraded and can be recovered (Embrapa)
- Forest restauration projects can be scaled up
- REDD+



Carbon credits' financial resources can be invested in:

- Forest communities
- Bioeconomy
- New technologies
- Industrial and transport decarbonization

BNDES FLORESTA VIVA



- Matchfunding with private firms (50% - 50%)
- Investment Targets: BRL 700 MM in 7 years
- Able to generate carbon credits

PARTNERS



Strengthening BNDES' role for climate mitigation



Forests and Biomes

- Deforestation control
- Biodiversity
- Water basins
- Forest restoration
- Bioeconomy



Industry

- Funding and policy instrument to update existing industries and foster infant green industries

NEW FUNDING
SOURCES AND
BETTER
CREDIT
CONDITIONS
FOR GREEN
INVESTMENT

GUARANTEE /
COLATERALS
FOR
GREENFIELD
AND
PRIORITIZED
PROJECTS

RISK CAPITAL FOR
GREEN INFANT
INDUSTRIES AND
TECHNOLOGY
SUPPLIERS

RESEARCH
PROGRAMS
AND START-
UPS

Decarbonization routes for hard-to-abate sectors



Priorities:

New Technologies – R&D and scale up

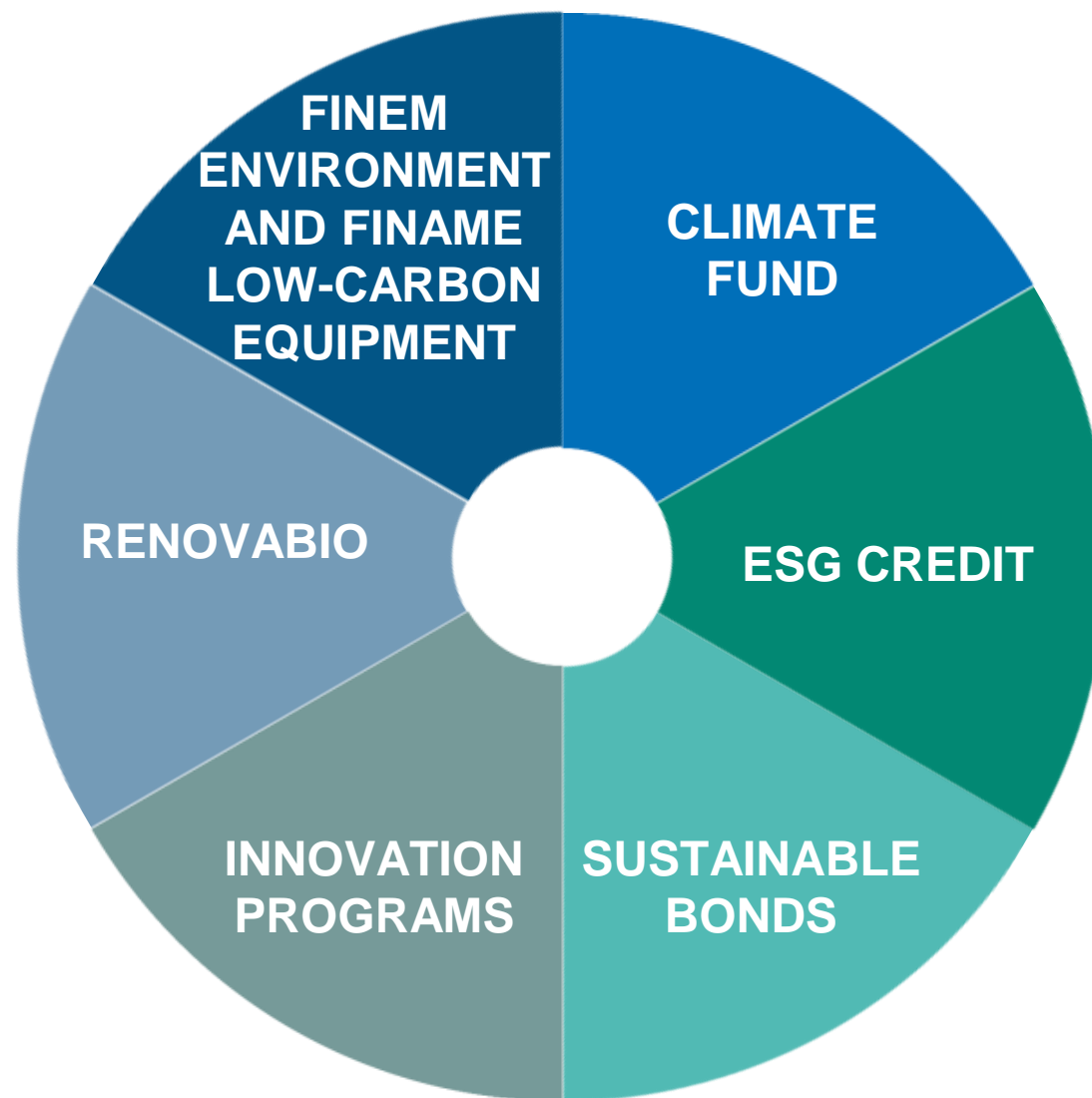
Inputs and materials improvements

New energy sources and co-generation – biofuels, natural gas, low-carbon hydrogen, etc.

Carbon Capture and Storage

Forest conservation and compensation

BNDES loans for decarbonization investments



BNDES Decarbonization Tools: Combining new banking tools

- **NEW PROGRAMS**

Climate Fund

New financial costs and priorities

Decarbonization Observatory

Track clients' practices and promote green investment

Innovation Program

New financial cost – TR
~2,12% a.a. + Spread + Risk

Budget: R\$ 20 Bi in 4 years

- **NEW TOOLS FOR CLIMATE TARGETS AND TRACKING**

Sustainable Taxonomy

New project classification at the project level

Avoided Emissions

Tool calculator for all green projects

GHG Inventory

Calculated for more than 85% of our portfolio at the project level

Climate Fund and Sovereign Sustainable Bonds (September 2023)



~ **BRL 10 BI**
In Loans for Climate-related projects

<https://www.gov.br/tesouronacional/pt-br/divida-publica-federal/titulos-sustentaveis-arquivos/opinioao-de-segunda-parte-second-party-opinion-spo>

“(...) Interest rates for Fundo Clima must have as a minimum reference the BR Treasury Yields, having the last issuance in USD a fixed interest rate of 6,15% p.y.”



Fundo Clima Allocation Plan 2024 (PAAR 2024)

<https://www.gov.br/mma/pt-br/acesso-a-informacao/apoio-a-projetos/fundo-nacional-sobre-mudanca-do-clima/paar-2023-final.pdf>

**1. Resilient and Sustainable
Urban Development**

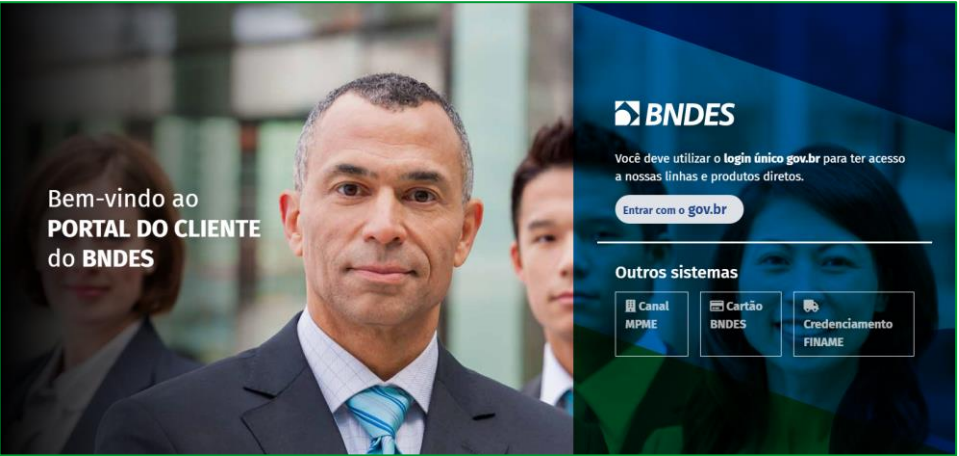
2. Green Industry

4. Energy Transition

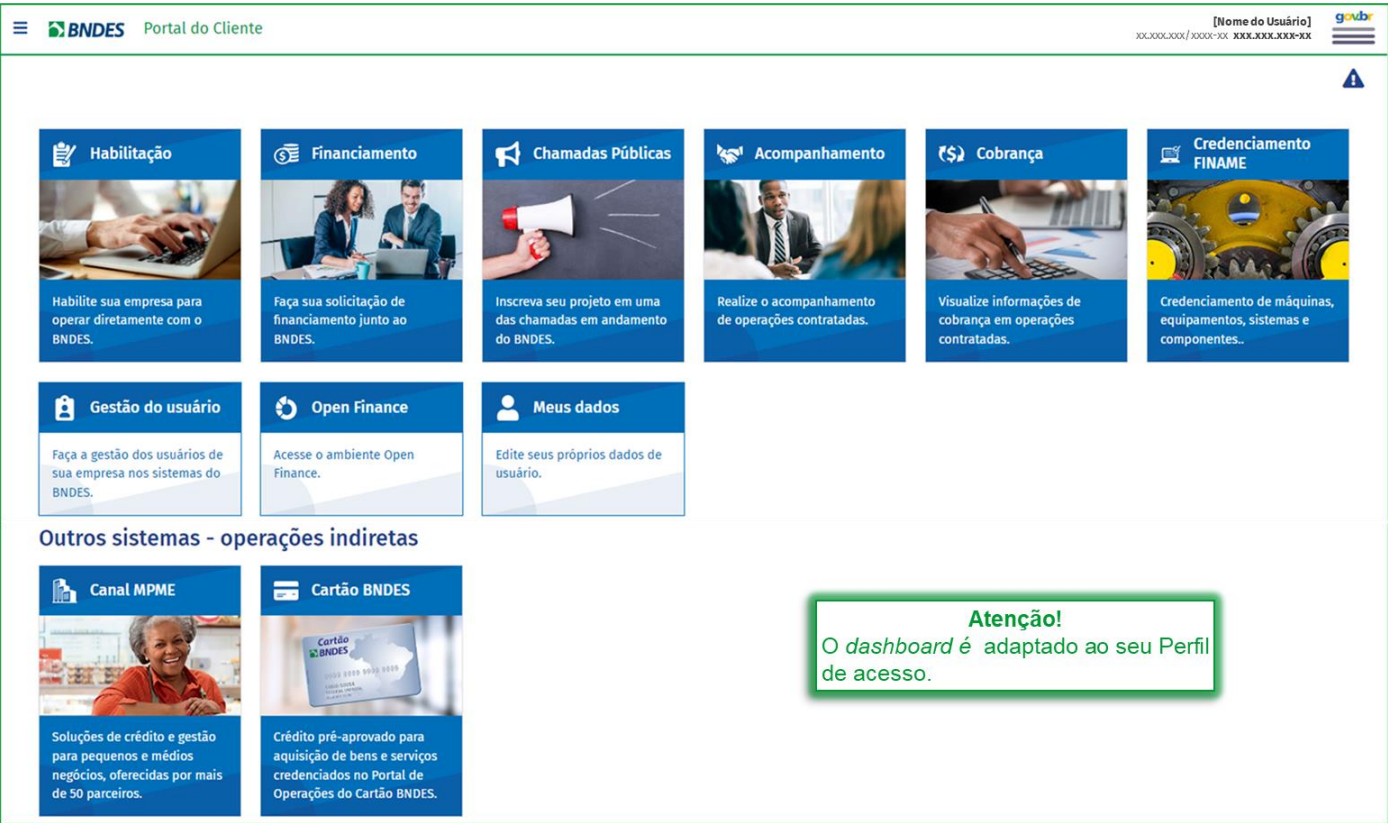
3. Clean Transport

**5. Climate-related services
and innovation**

How to apply for our products



<https://portal.bndes.gov.br/>



Main Takeaways

- Brazilian firms can lead global decarbonization efforts and just transition
- BNDES is providing the tools to support these efforts at the scale and pace of climate and social emergence → 1,5°C aligned portfolio
- BNDES can also provide assistance for project origination and carbon credits
- We have new funding instruments: (i) Floresta Viva; (ii) Fundo Clima 2024; (iii) Innovation (having TR as cost reference)
- We have new assessment tools: (i) Carbon Inventory; (ii) Avoided Emissions; (iii) Taxonomy

Thank you

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BNDES - Climate Transition Department



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