



ABiogás

Associação Brasileira do Biogás

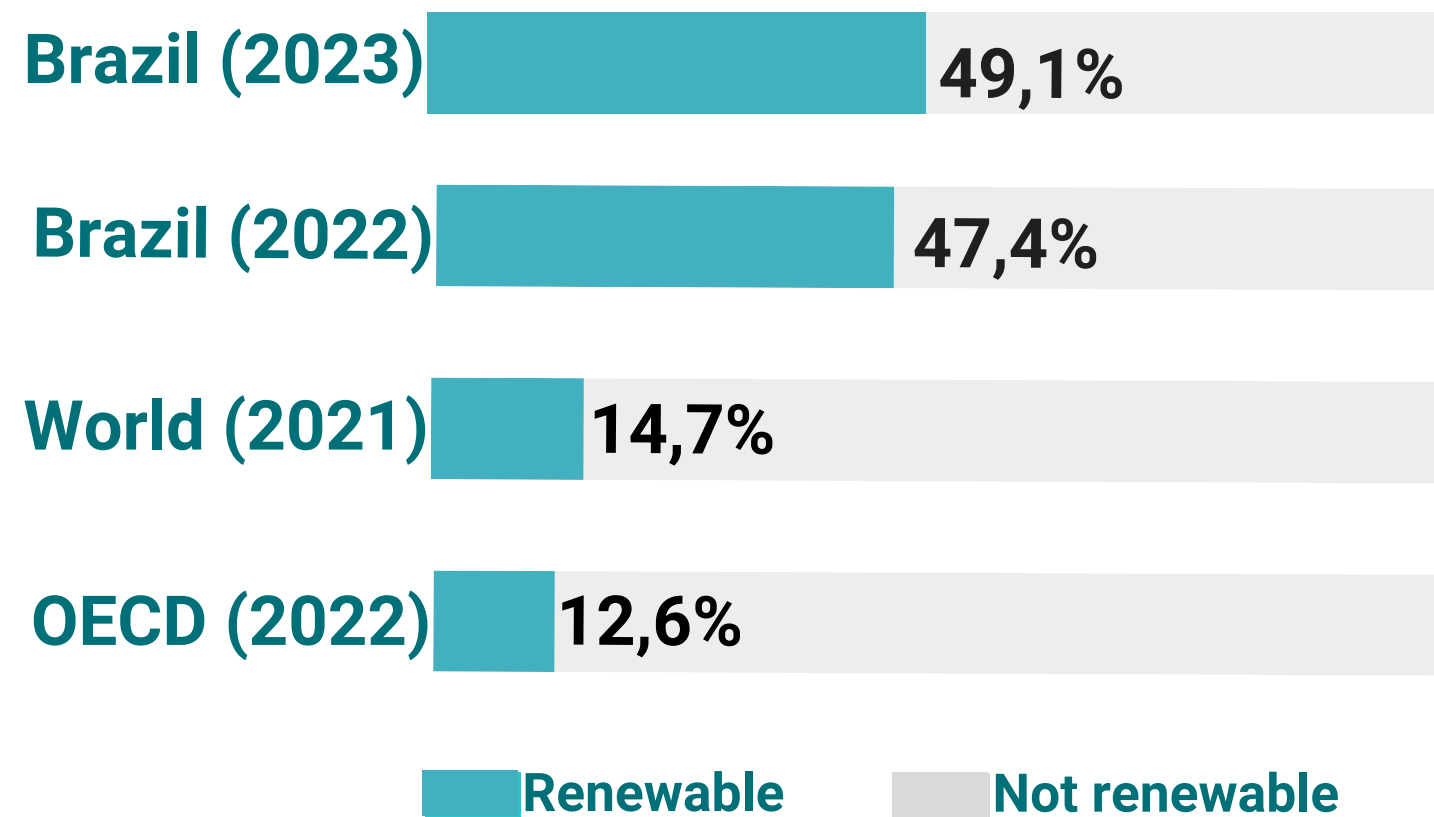


ASSOCIATED COMPANIES

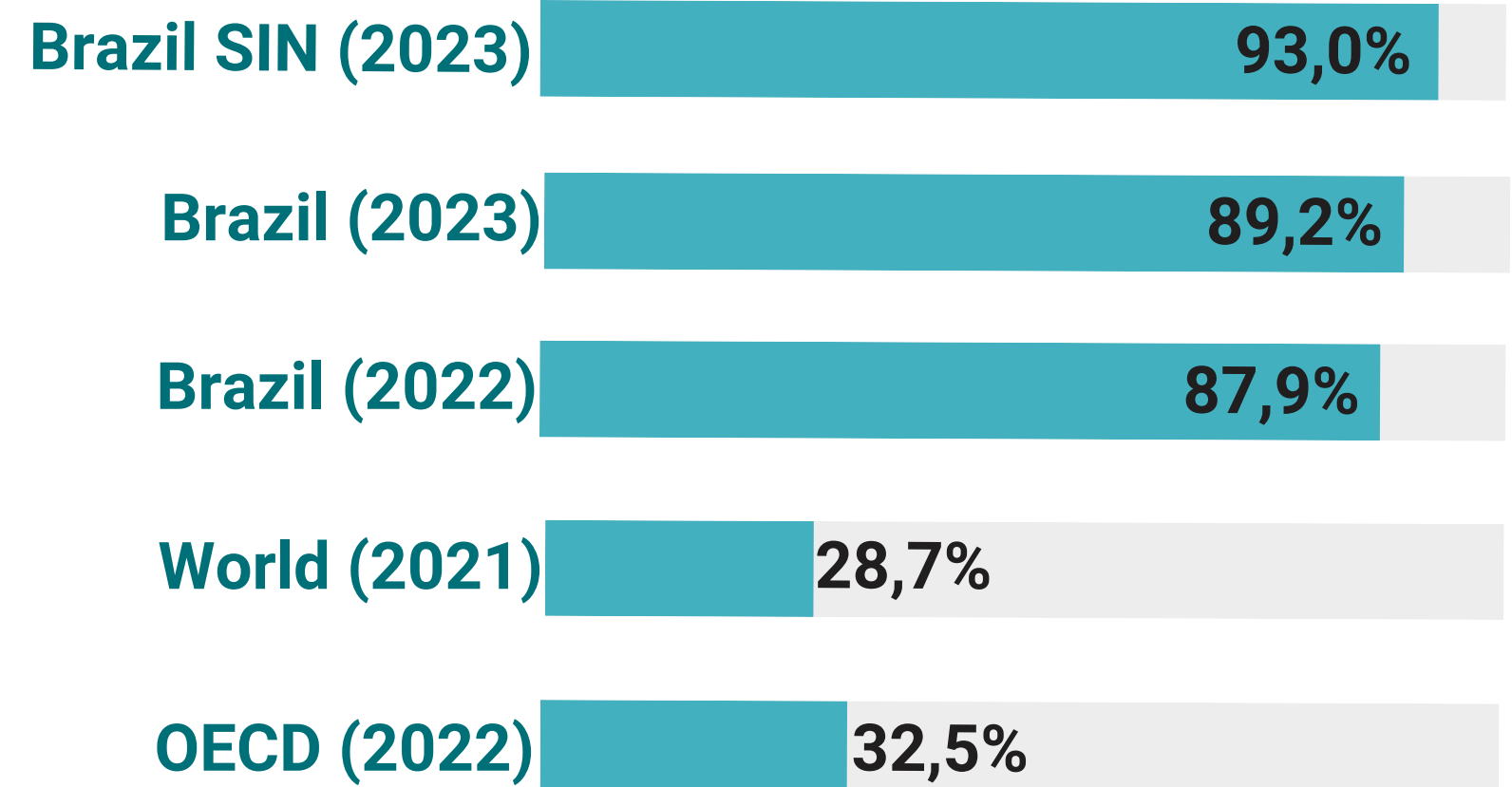


BRAZILIAN MATRIX

ENERGY MATRIX

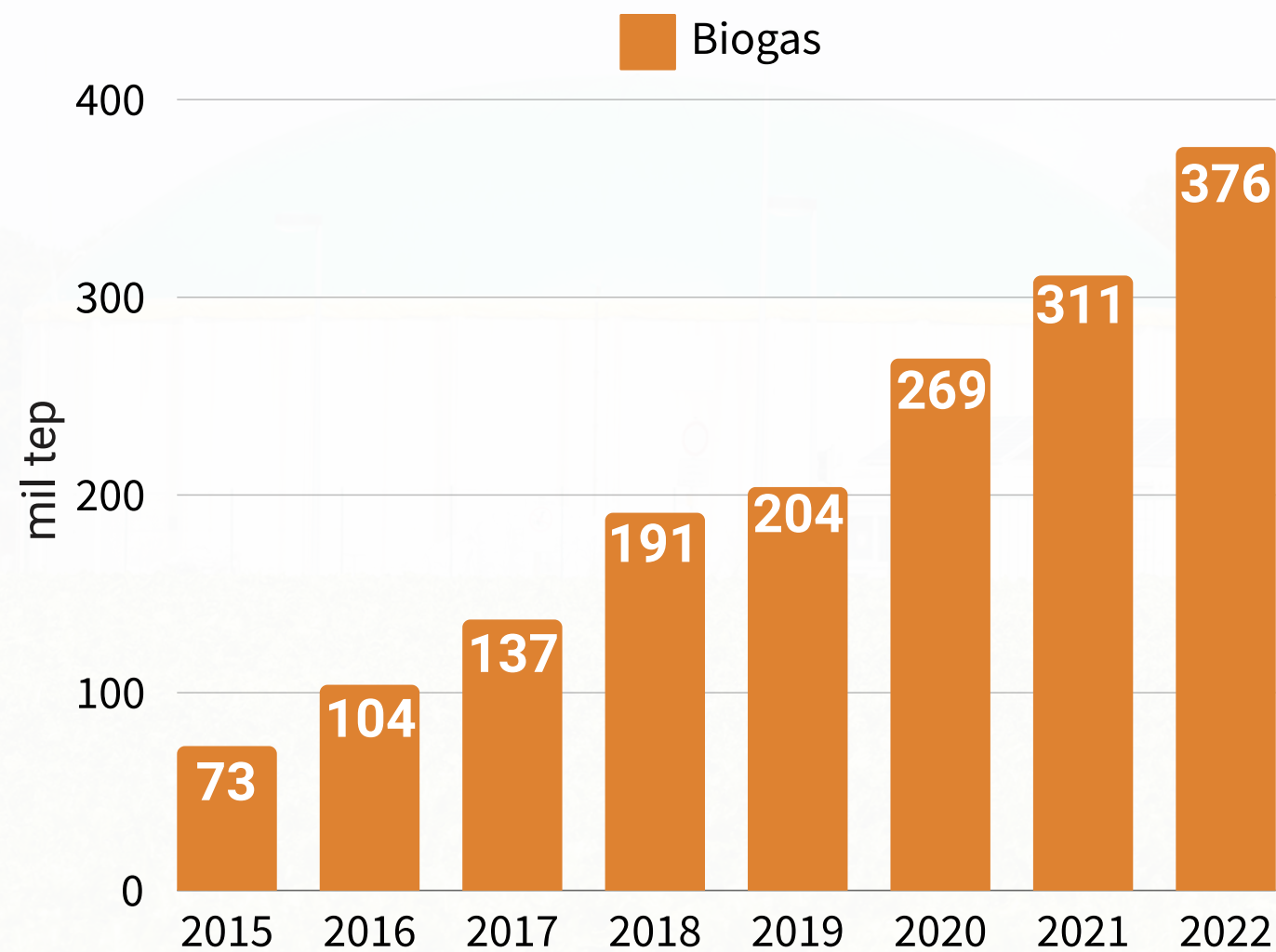


POWER MATRIX

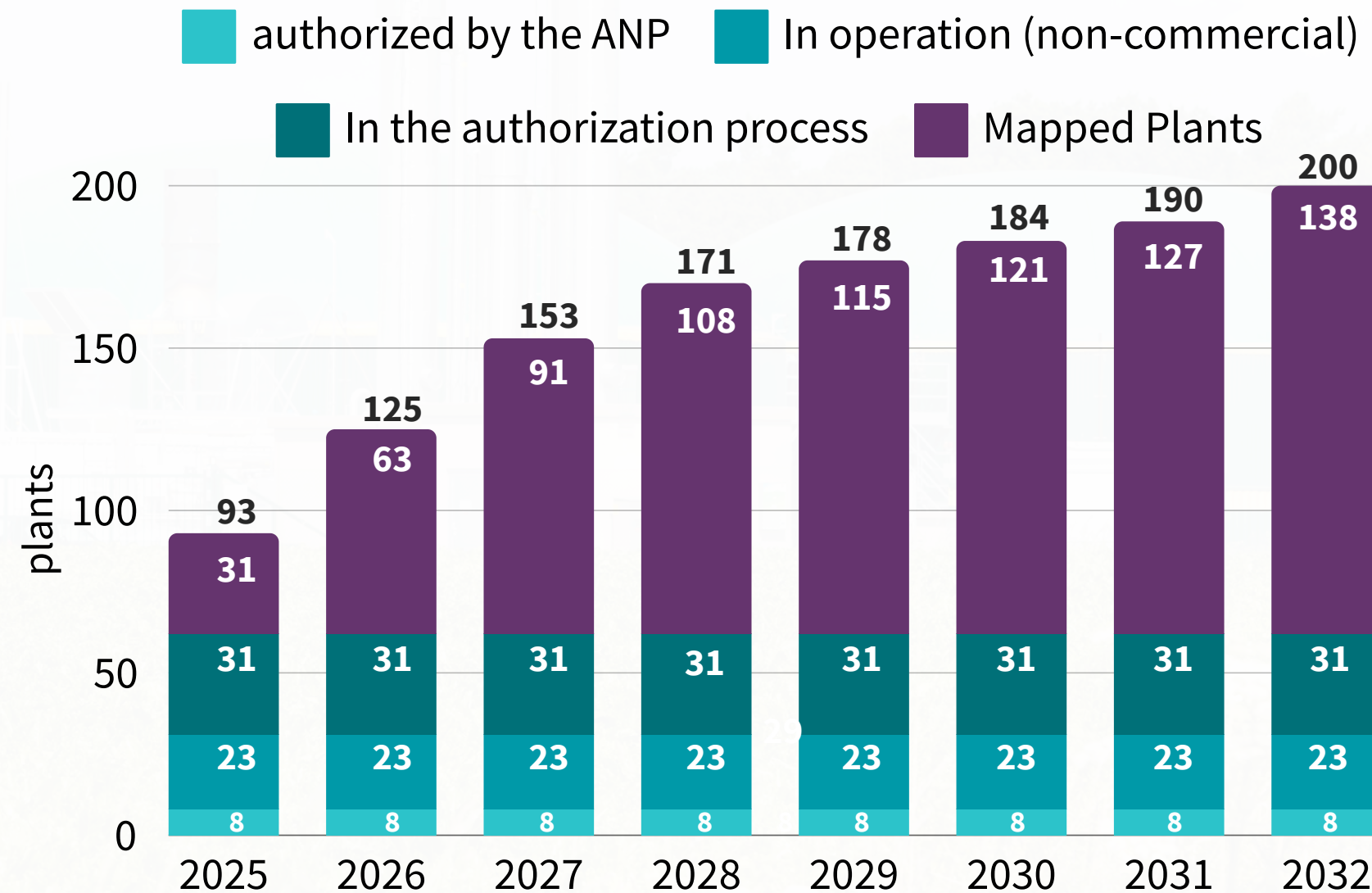


GROWTH OF BIOGAS AND BIOMETHANE IN THE ENERGY MATRIX

PARTICIPATION OF BIOGAS IN INTERNAL ENERGY SUPPLY



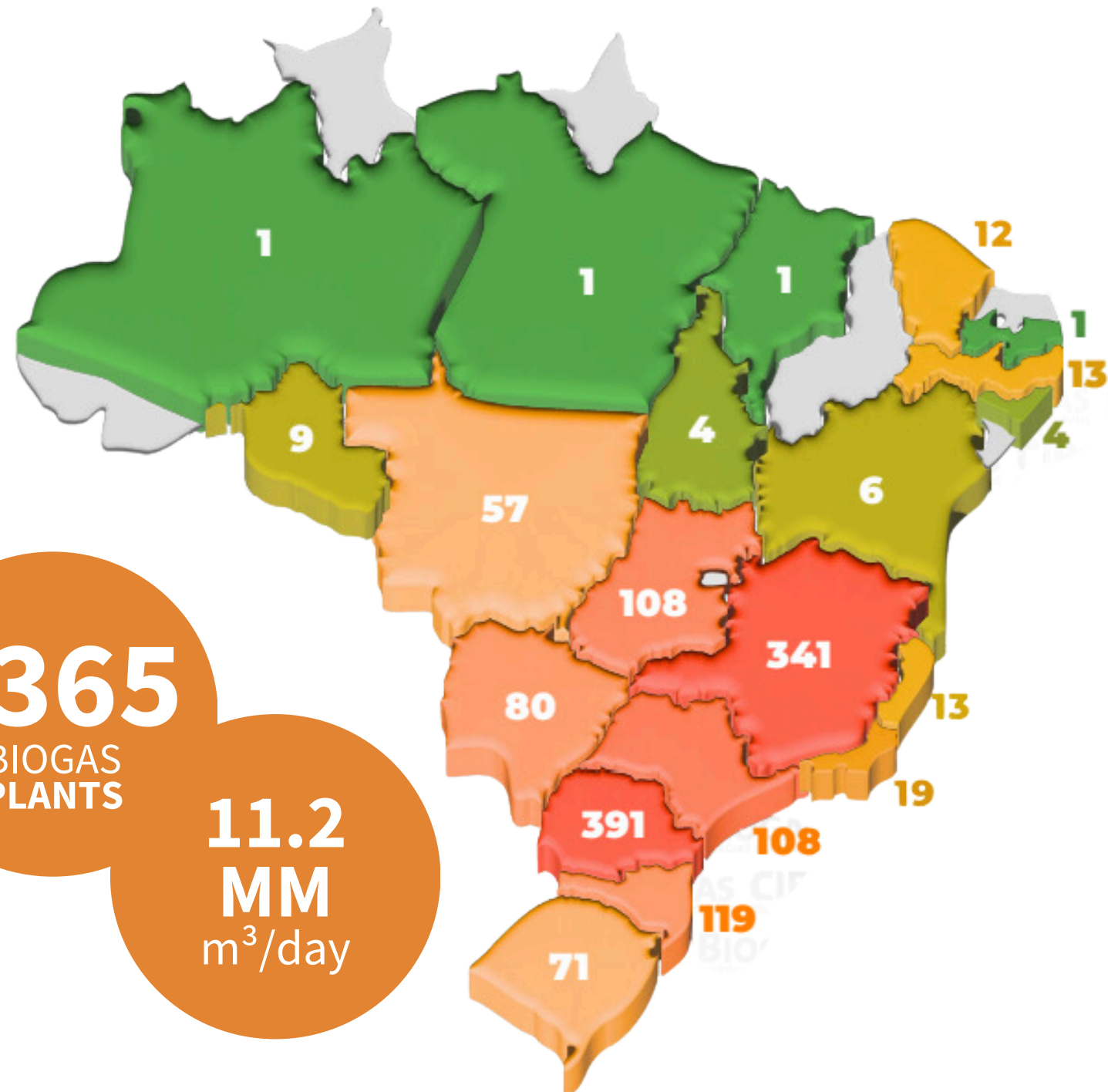
BIOMETHANE GROWTH PROJECTION UNTIL 2032



32	8,0
31	7,7
30	7,4
29	7,1
28	6,8
27	6,0
26	4,5
25	3,0

BIOGAS AND BIOMETHANE PRODUCTION MAP

BIOGAS

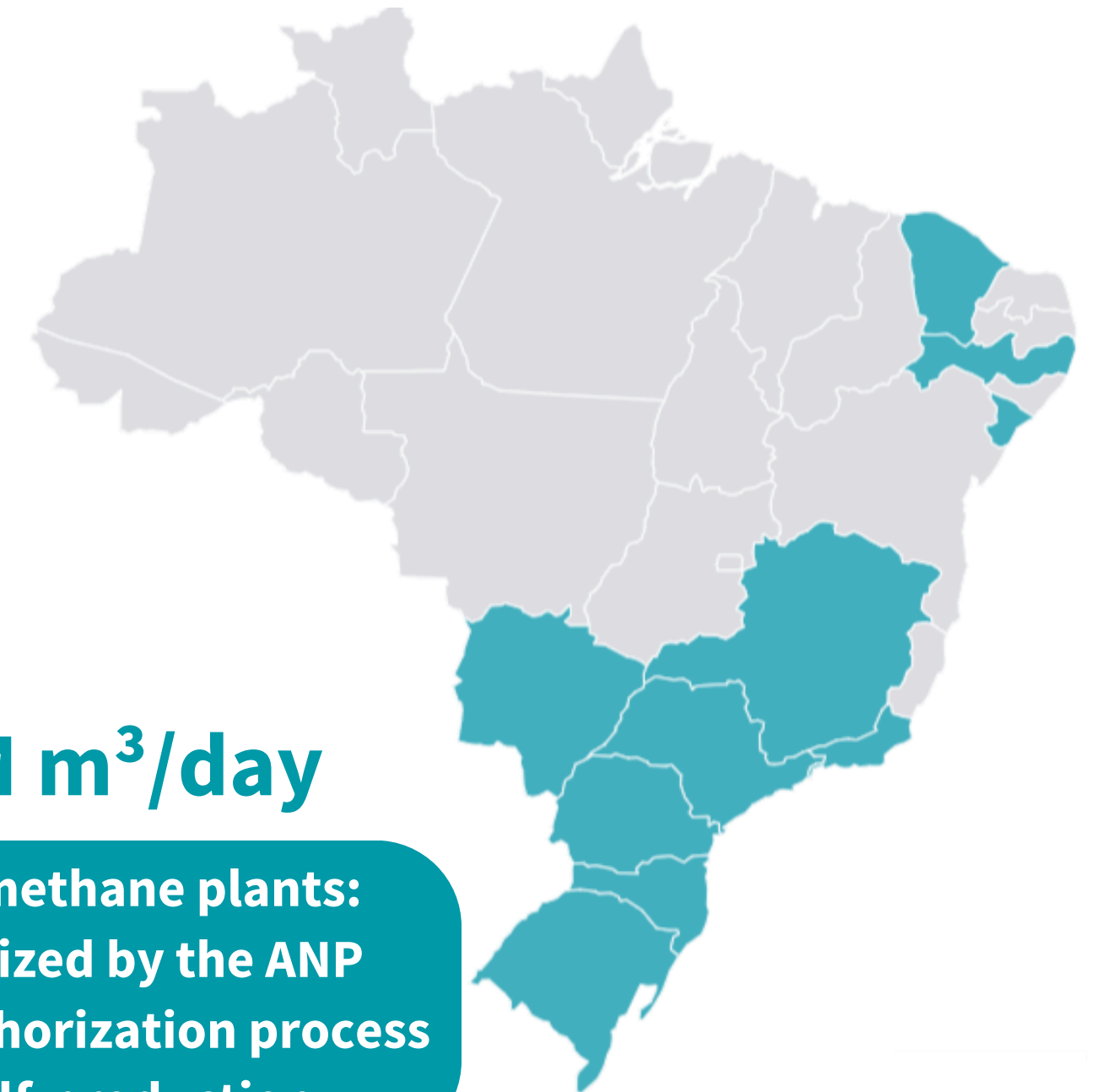


1365

BIOGAS
PLANTS

11.2
MM
m³/day

BIOMETHANE



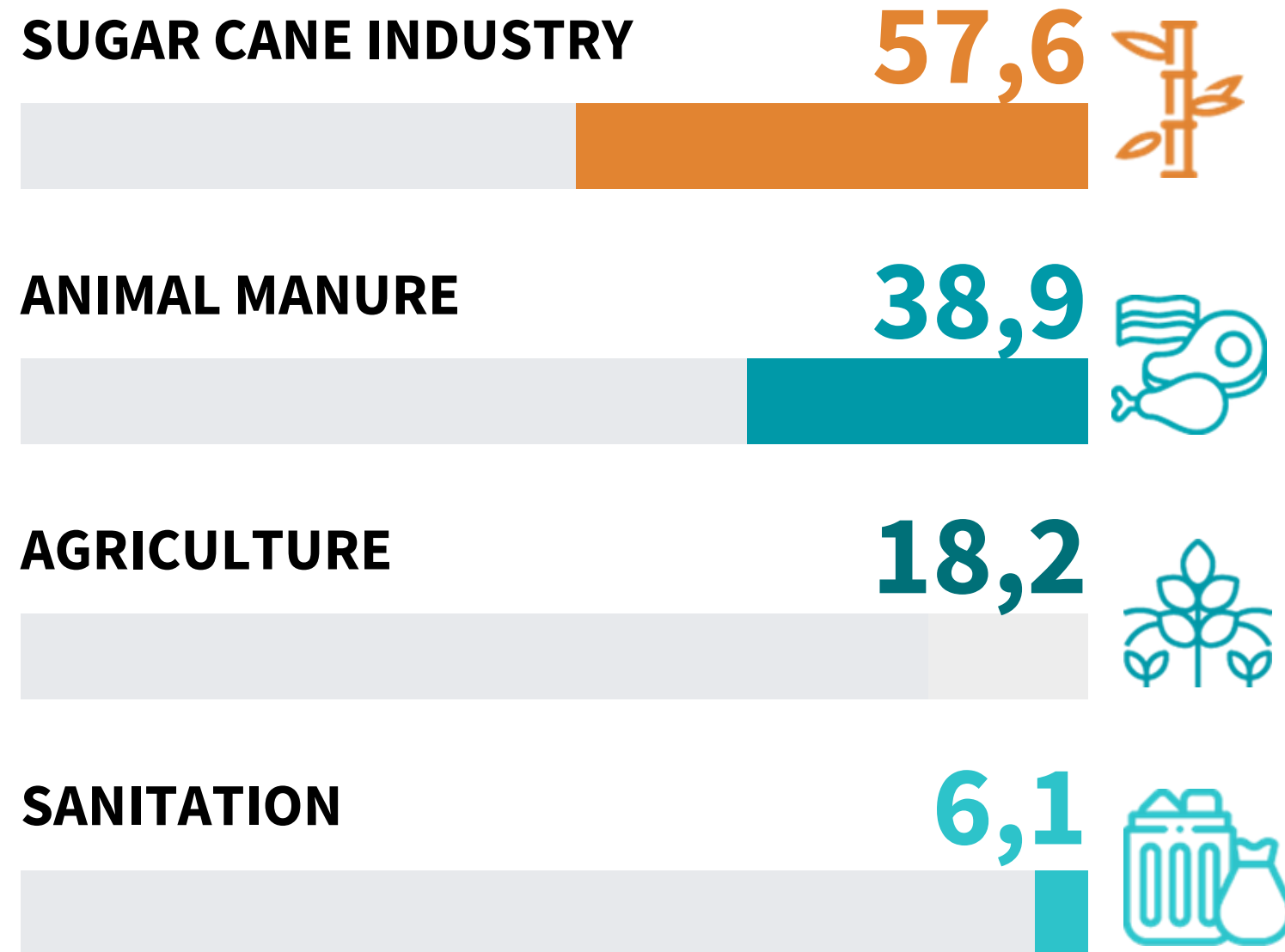
2 MM m³/day

62 biomethane plants:
8 authorized by the ANP
31 In the authorization process
23 self-production

BRAZIL: BIOGAS POTENTIAL BEING DEVELOPED

**Brazilian
Biogas
potential**

120 million m³/day



Brazil produces biogas exclusively from waste

Anaerobic digestion is a **natural** and **sustainable** process that transforms organic waste into renewable energy, using only **waste materials** and not relying on any energy crops.



**SUGAR CANE
INDUSTRY**



AGRICULTURE



ANIMAL MANURE



SANITATION

CIRCULAR ECONOMY

BLEY ENERGIAS

Londrina, PR - Brasil

CIRCULAR ECONOMY: TRANSPORT OF MILK AND ANIMAL FEED



Substrate:
Animal Manure

Biomehane Volume:
200 m³/day

ADECOAGRO

Ivinhema, MS - Brazil

CIRCULAR ECONOMY: POWER GENERATION AND TRANSPORTATION FUEL



Substrate:
Sugar cane industry

Biomethane Volume:
6,600 m³/day

YARA FERTILIZANTES

Cubatão, SP - Brazil

CIRCULAR ECONOMY: 5 THOUSAND TONS/YEAR OF RENEWABLE AMMONIA



Substrate:
Sugar cane industry

Biomethane Volume:
20,000 m³/day



INDUSTRY

GEO BIO GAS&CARBON

Tamboara, PR - Brazil

INDUSTRIAL USE: FURNACES AND FORGES FOR METALLURGICAL PRODUCTION AT AESA AUTOMOLAS



Substrate:
Agroindustry

Biogas Volume:
86,880 m³/day

ZEG BIOGÁS

São José dos Campos, SP - Brazil

INDUSTRIAL USE: INDUSTRIAL CONSUMERS IN THE CHEMICAL AND GLASS SEGMENT



Substrate:
Sanitation

Biogas Volume:
30,000 m³/day

TRANSPORT

GÁS VERDE - URCA ENERGIA

Seropédica, RJ - Brazil



Substrate:
Landfill

Biomethane Volume:
120,000 m³/day

COMPANIES THAT USE BIOMETHANE IN THEIR FLEETS

Luft Logistics inicia testes com caminhão movido a GNV e biometano



Bravo incorpora caminhões movidos a gás e inicia avaliação do biometano para redução da emissão de CO2

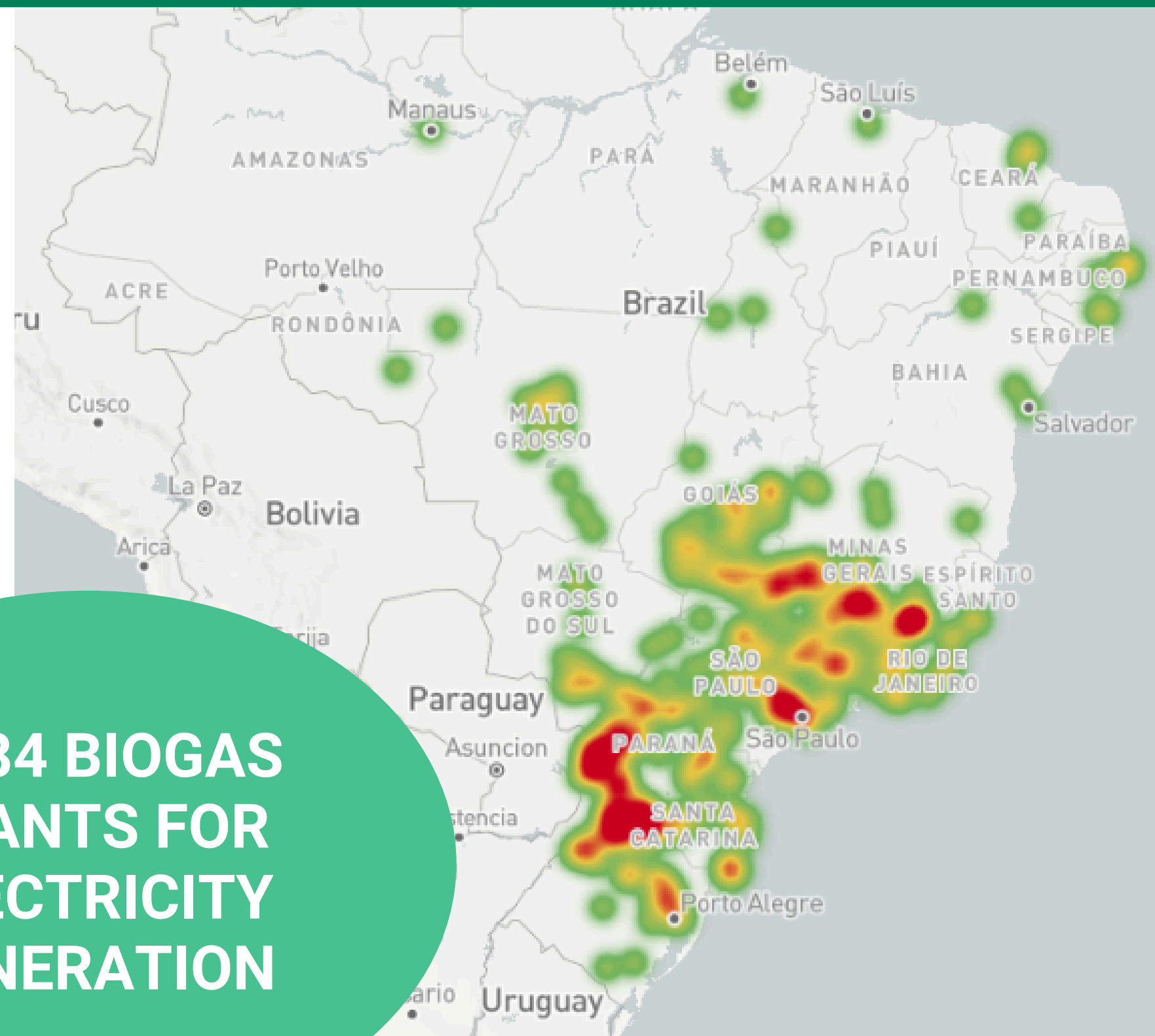


ELECTRICITY GENERATION FROM BIOGAS IN BRAZIL

86%

BIOGAS PLANTS IN OPERATION IN 2023 ARE USED FOR ELECTRICITY GENERATION

1,184 BIOGAS PLANTS FOR ELECTRICITY GENERATION



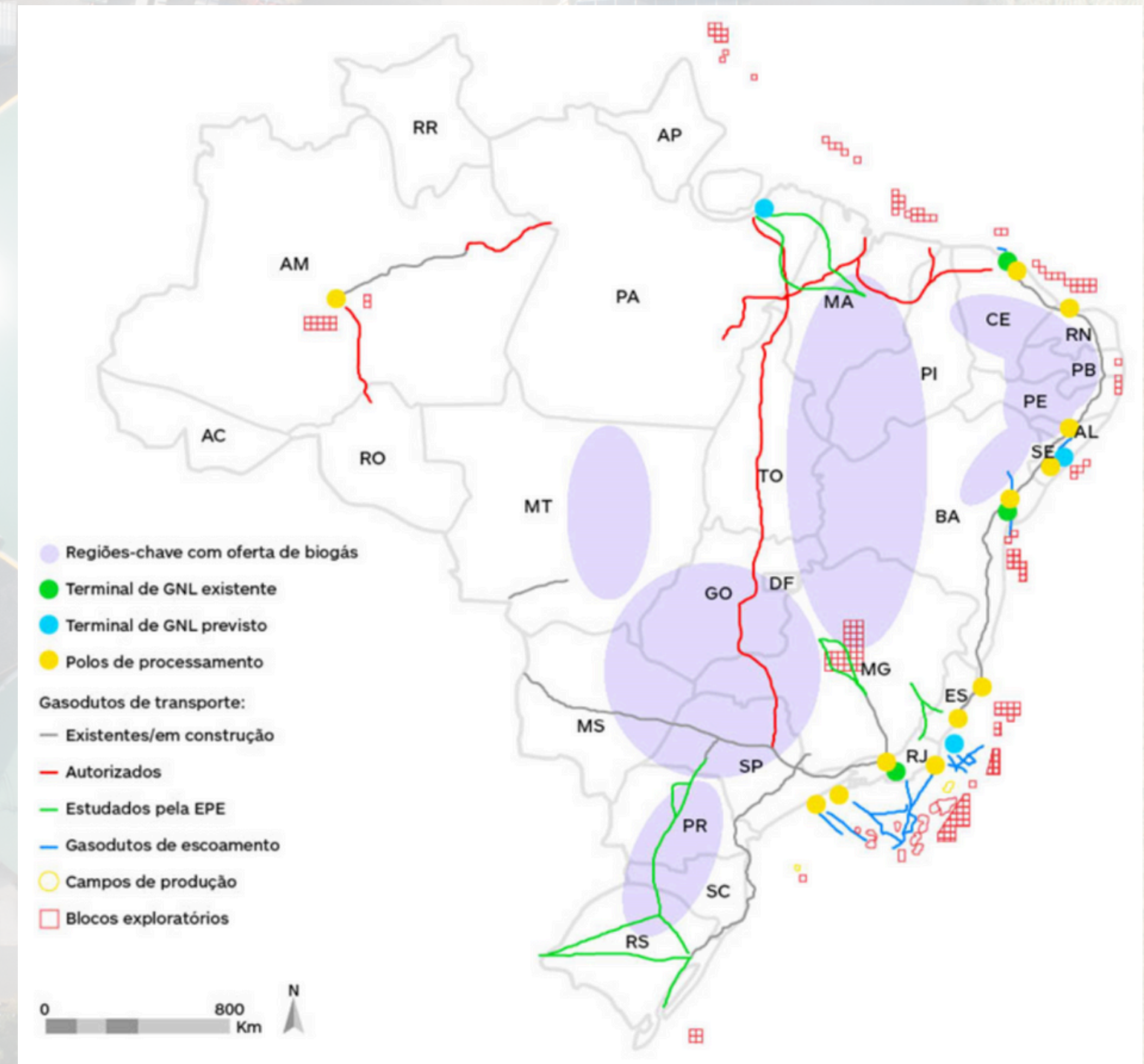
BOTTLENECKS

INFRAESTRUCTURE

REGULATORY
IMPROVEMENT

COSTS

PRICING OF THE
RENEWABLE
ATTRIBUTE



REGULATORY INCENTIVES

THE SUSTAINABLE CORRIDORS PROGRAM:

State incentives to adapt fuel stations to supply trucks with natural gas and biomethane and federal incentives for the substitution of diesel truck fleet to CNG and LNG motors.

PARANÁ RENEWABLE RURAL ENERGY - RENOVAPR:

Special financing conditions for renewable energy generation, including biogas and biomethane production.

NATIONAL METHANE EMISSIONS REDUCTION PROGRAM – METHANE ZERO:

Specific credit and financing lines for the development of actions and activities related to biomethane and biogas stand out.

GREEN SUPPLY CONTRACT:

Natural Gas distribution companies in the State of São Paulo may sign with consumers a contract that will provide biomethane to consumers, by charging an additional price.

MOVER: Establishes that all government incentives must consider life cycle energy analysis when making policies to incentivize green mobility.

BIOMETHANE MANDATORY MIXTURE:

State of Rio de Janeiro obliges natural gas distribution companies to have a 10% mixture of biomethane, but it sets a very low cap price for the acquisition of biomethane.

REGULATORY INCENTIVES

EXEMPTION FROM ENVIRONMENTAL LICENSING FEES IN PARANÁ: Activities with low pollution potential are exempt from environmental licenses fees.

SIMPLIFICATION OF ENVIRONMENT LICENSING BUREAUCRACY: State of Paraná establishes different environmental licensing process according to the environment risk presented by different sizes and kinds of residues used in plants.

FUELS OF THE FUTURE: Creates of a decarbonization target that will be met through the mandatory purchase of biomethane by producers and importers of natural gas and creation of a certificate of guarantee of origin of biomethane. Decarbonization target of SAF.

HYDROGEN LEGAL FRAMEWORK AND INCENTIVES TO GREEN AND RENEWABLE HYDROGEN: Regulates the production of hydrogen considered low-carbon and establishes a voluntary certification.

NEW GAS LAW: Brought measures to opening the gas market in Brazil and establishes that biomethane that complies with ANP standardization must have equal regulatory treatment of natural gas.

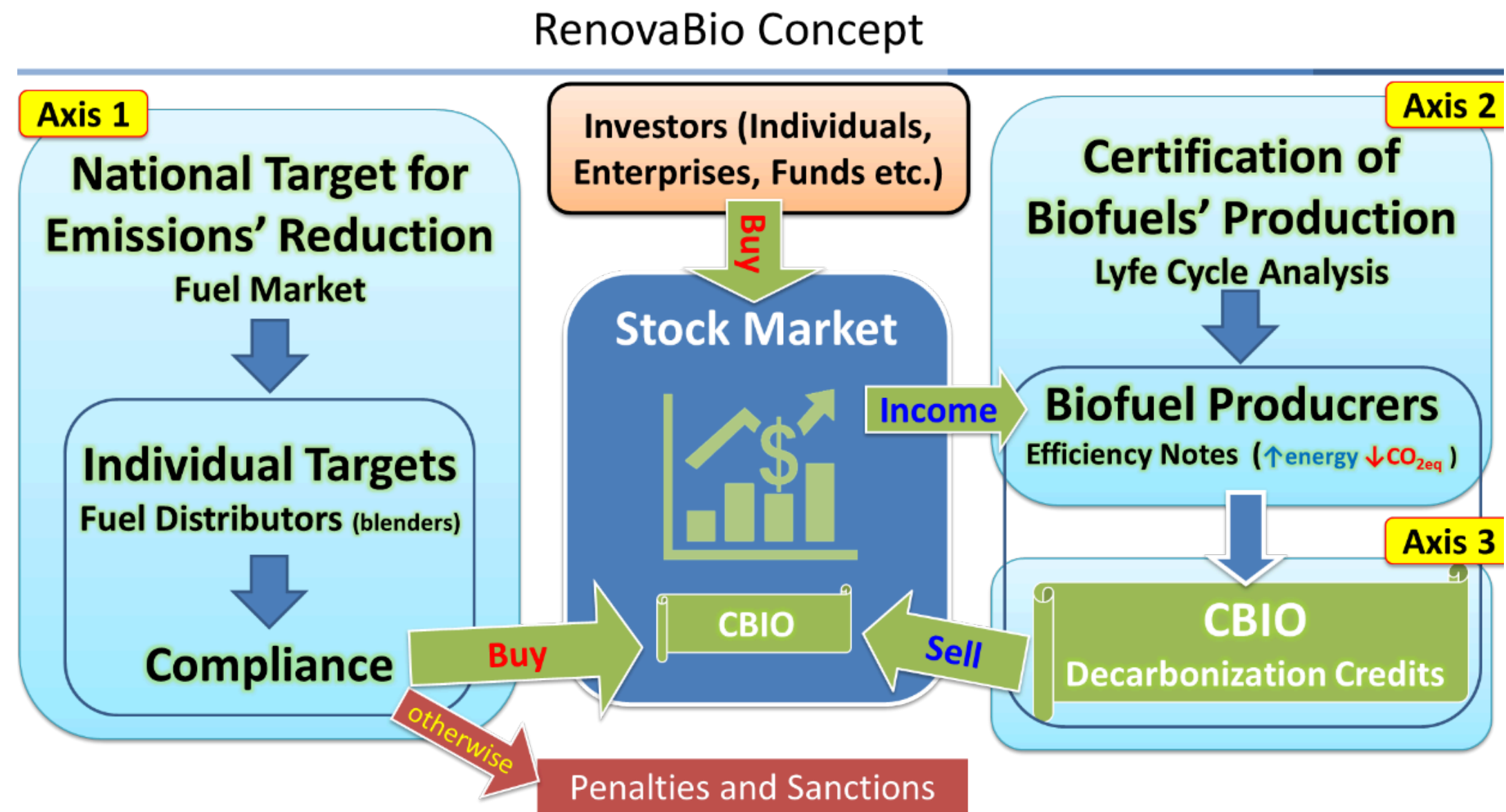
NATIONAL POLICY FOR SOLID WASTE: Established targets for improving the management of urban solid waste, including biogas production.

REGULATORY INCENTIVES

NATIONAL BIOFUELS POLICY - RENOVABIO: Program that sets decarbonization goals for liquid fuel distributors, who need to acquire decarbonization credits (CBIOs) from biofuel producers.

US\$ 19,30 (average value on April 12, 2024)

Since the beginning of RenovaBio, the prices of credits have ranged from US\$ 2,89 to US\$ 40,31



TAX INCENTIVES

CONSTITUTIONAL AMENDMENT N° 123/2022

Established that taxation of biofuels and renewable hydrogen must be lower than the taxation of fossil fuels, to guarantee competitiveness.

SPECIAL REGIME OF INCENTIVES FOR INFRASTRUCTURE DEVELOPMENT (REIDI)

Reidi's tax incentive consists of suspending the incidence of contributions to PIS (1.65%) and COFINS (7.6%) on revenues arising from the acquisitions of good necessary to the construction of biogas and biomethane plants

REDUCTION OF ICMS (IVA) RATE FOR BIOGAS AND BIOMETHANE

Reduces tax rate on biogas and biomethane transactions to 12% in some states.

TAX REFORM

Simplifies State and Federal IVA taxes and creates a Selective Tax to products that are harmful to health and environment.

INCENTIVATED DEBENTURES AND BONDS

Tax reduction for renewable energy infrastructure companies that issue bonds and debentures.

BILLS UNDER DISCUSSION

INCENTIVE POLICY AIMED AT THE TRANSITION OF THE TRANSPORT SECTOR: Tax reduction for (i) new technologies research and production that promote substitution of diesel vehicles to natural gas and biomethane vehicles; (ii) acquisition or importation of such technologies; (iii) substitution of diesel and coal energy production to natural gas and biomethane thermal plants. IPI (IVA) exemption for natural gas and biomethane production, infrastructure, distribution and fuel stations. Regulatory and tax incentives for municipal buses that use natural gas and biomethane and minimum percentage of such buses in new acquisitions. Implementation of sustainable corridors.

ACCELERATED DEPRECIATION: Indirect reduction the financial cost of acquiring capital goods to lower Income Taxes and some IVA contributions.

ENERGY TRANSITION ACCELERATION PROGRAM - PATEN: Promote financing of sustainable development projects, especially those related to infrastructure, technological research and development of technological innovation.



ACTIONS/INCENTIVES/POLICIES

WORK WELL

- RENOVABIO
- TAX REDUCTION
- SPECIAL CONDITION FOR FINANCING
- SIMPLIFICATION OF ENVIRONMENT LICENSES BUREAUCRACY

IMPLEMENTATION

- SUSTAINABLE CORRIDORS
- TAX REFORM
- MOVER
- NEW GAS LAW

DO NOT WORK WELL

- GREEN SUPPLY CONTRACT
- RENOVAPR
- 10% MANDATORY MIXTURE WITH CAP PRICE
- NATIONAL POLICY FOR SOLID WASTE

UNDER DISCUSSION

- GREEN INDUSTRIALIZATION PROGRAM
- FERTILIZER PRODUCTION INCENTIVES
- FEDERAL SUSTAINABLE CORRIDORS PROGRAM



ABioGás

Associação Brasileira do Biogás

Renata Isfer

Executive President