



ABiogás

Associação Brasileira do Biogás

Renata Isfer
Executive President

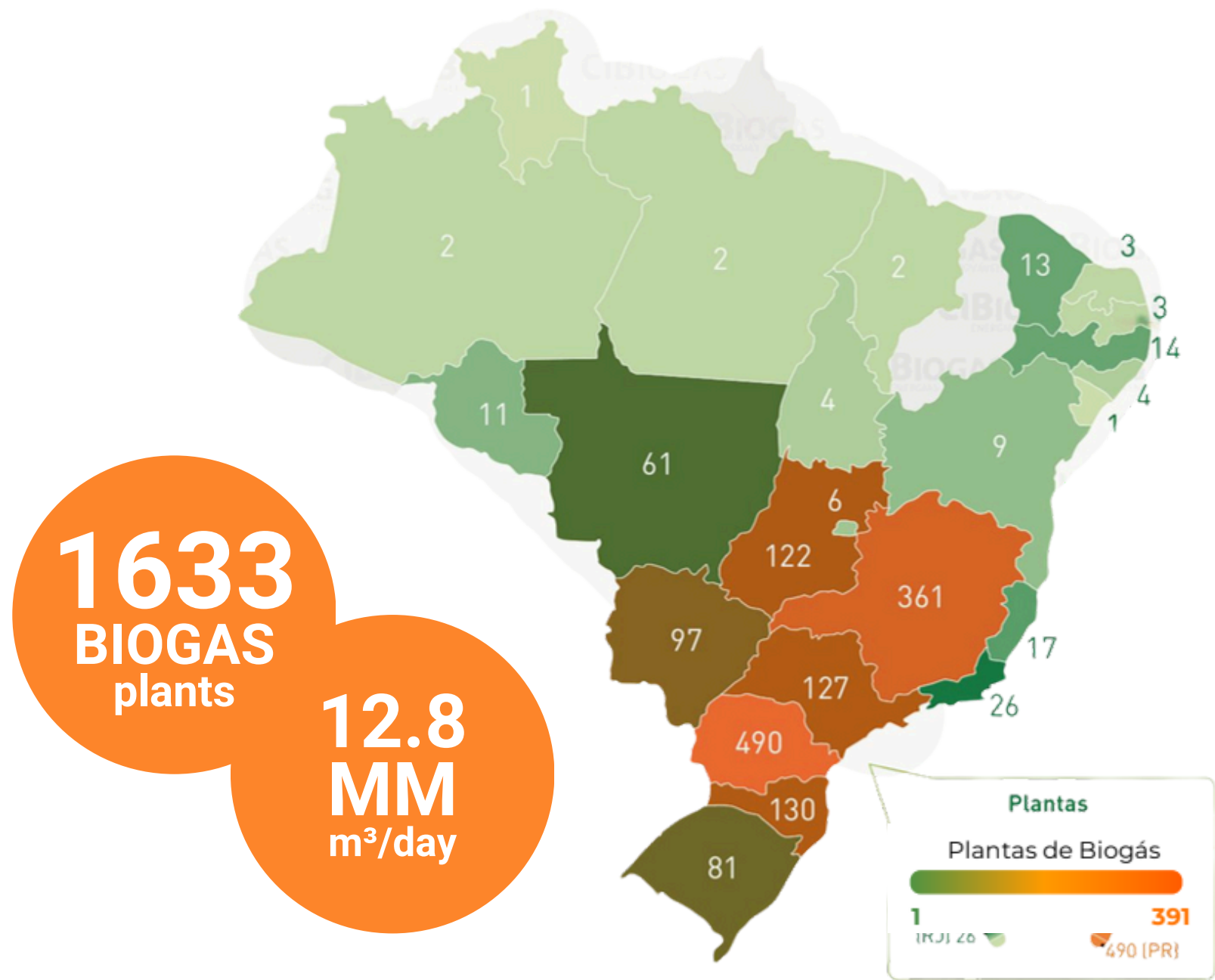


ASSOCIATED COMPANIES

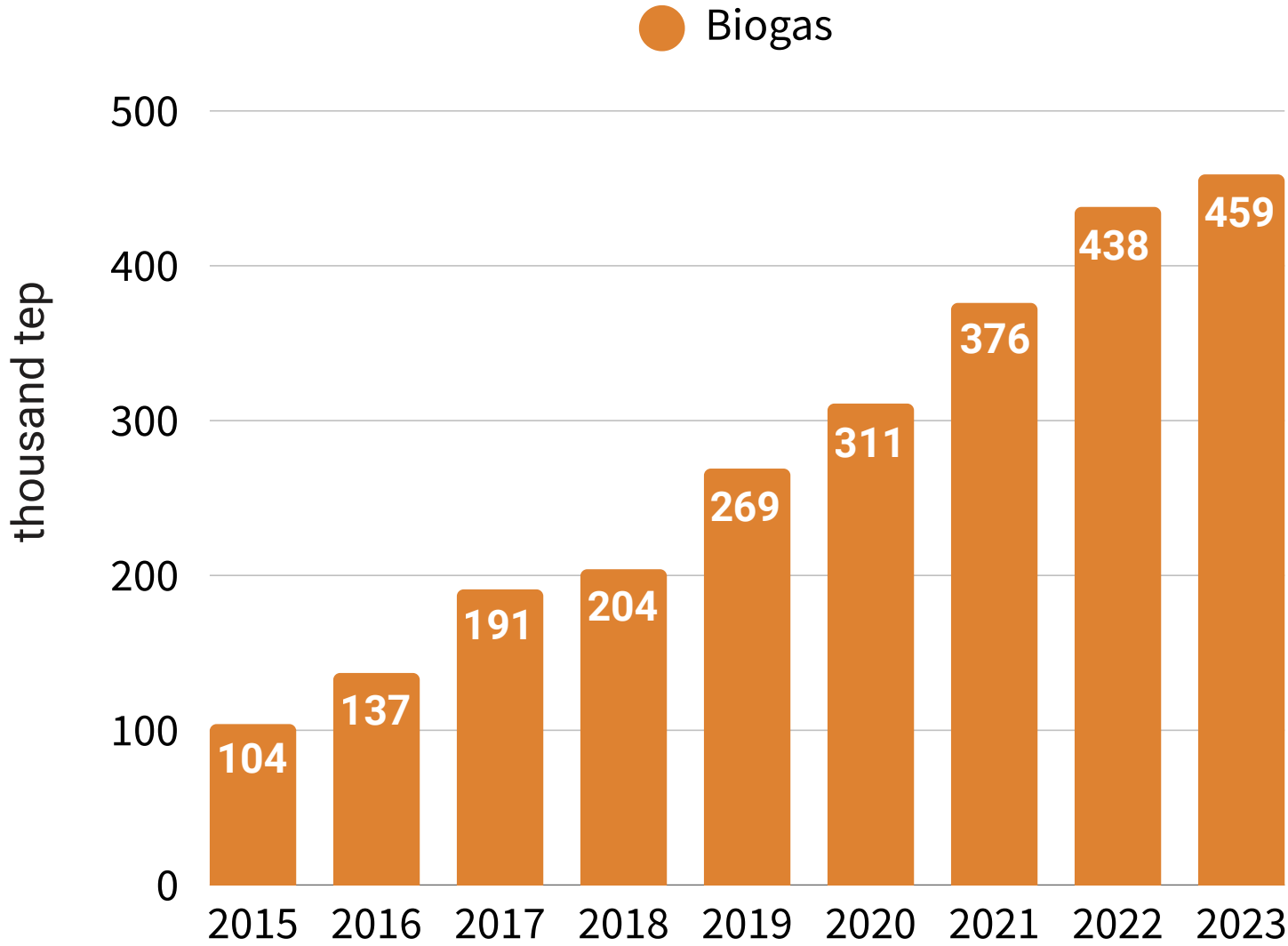


OVERVIEW OF BIOGAS IN BRAZIL

BIOGAS

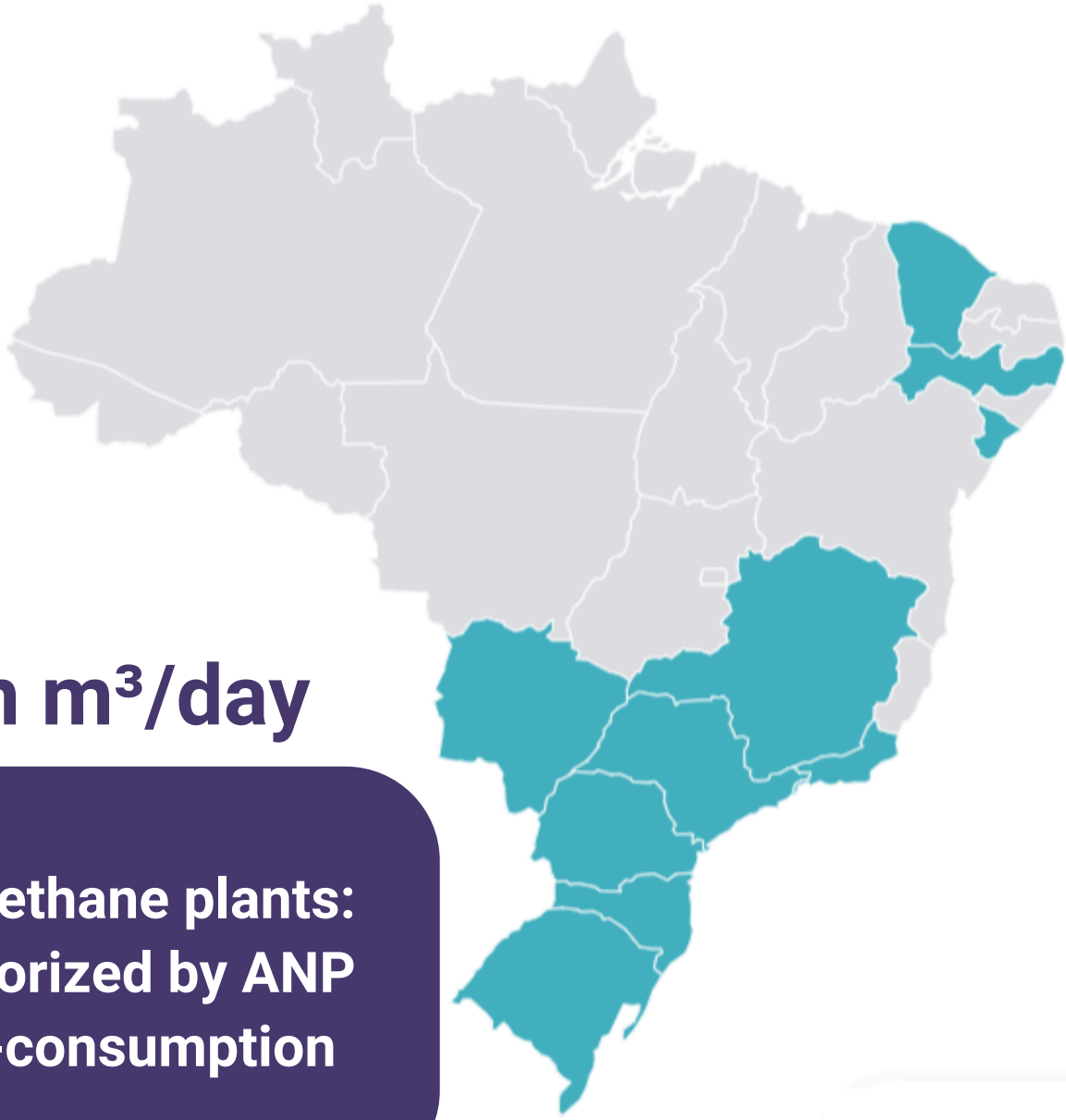


BIOGAS SHARE IN THE DOMESTIC ENERGY SUPPLY



OVERVIEW OF BIOMETHANE IN BRAZIL

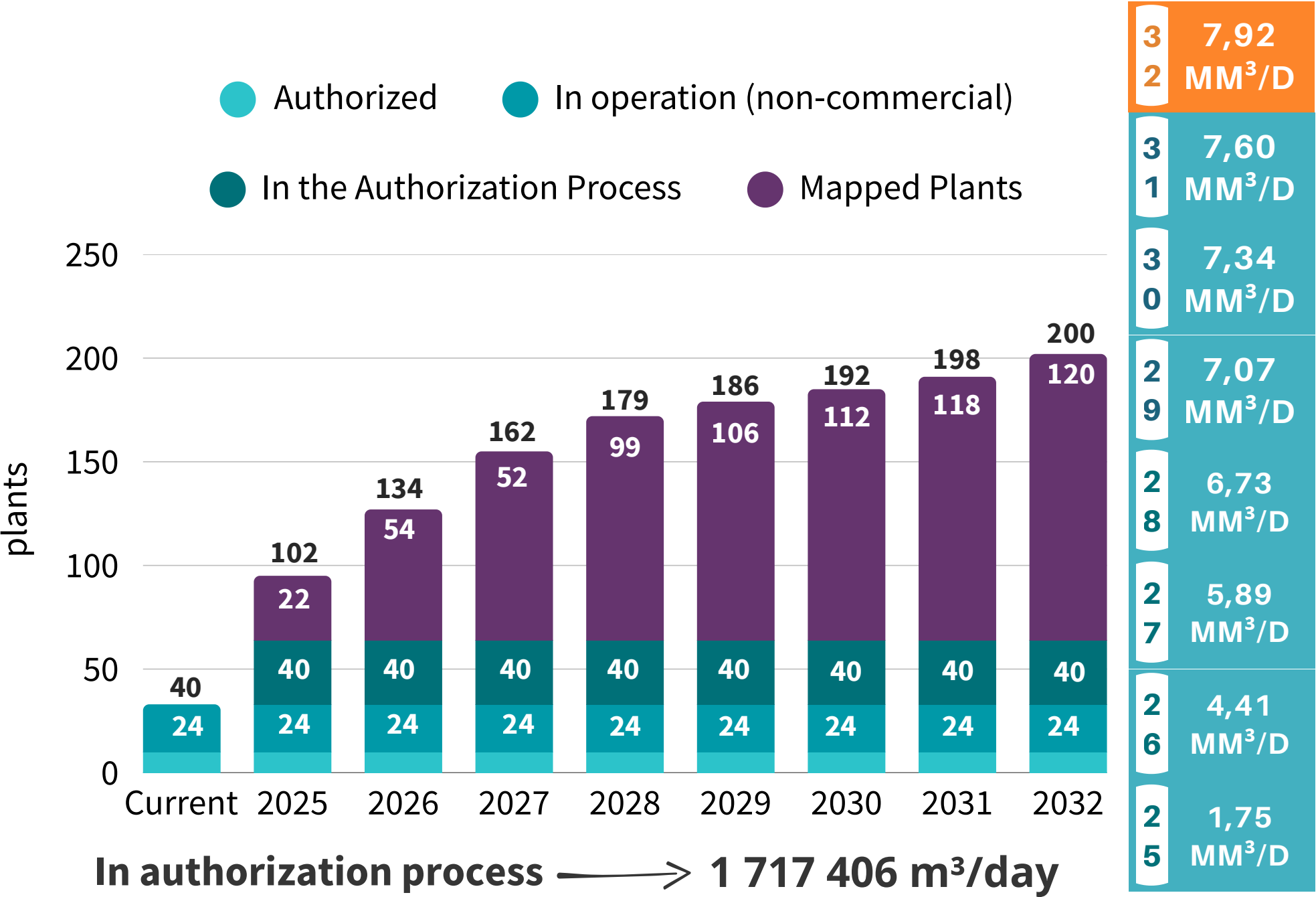
BIOMETHANE



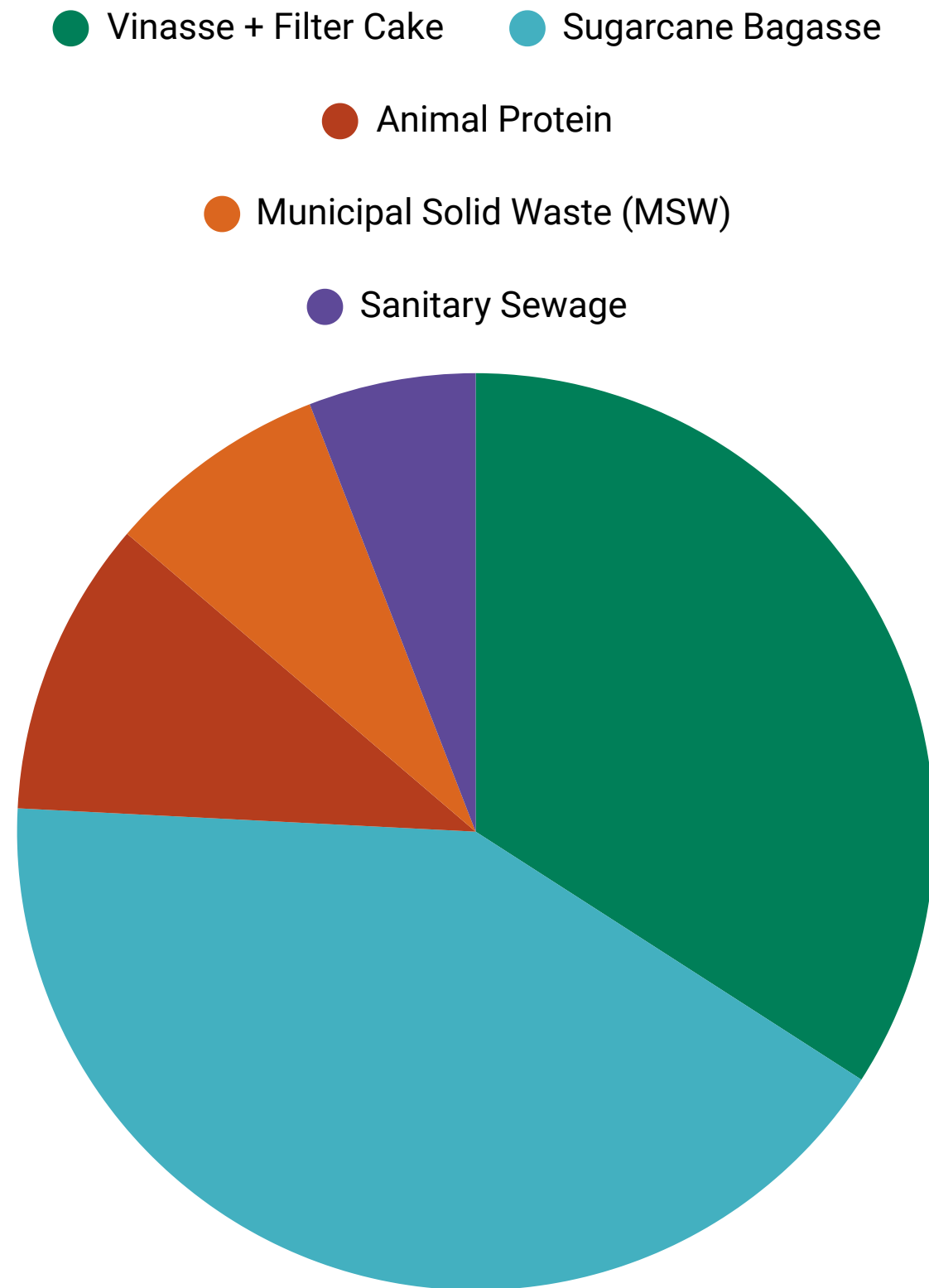
1 million m³/day

40 biomethane plants:
16 authorized by ANP
24 self-consumption

ESTIMATED GROWTH OF BIOMETHANE BY 2032



SHORT-TERM POTENTIAL – ABIOGÁS



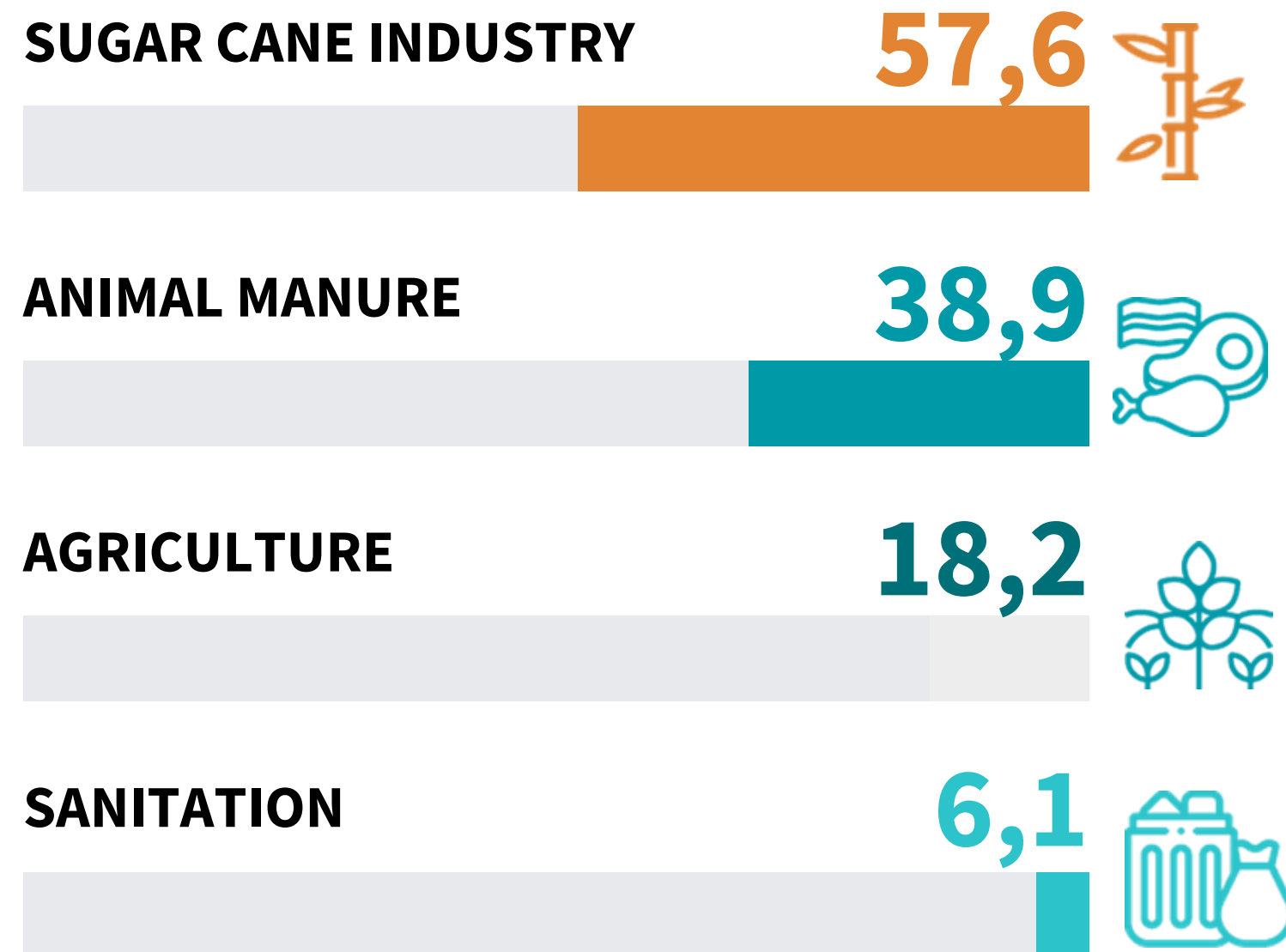
By 2030, biomethane
production could reach
34,9 million
m³/day

Source: ABiogás, based on the Study for the Development of Biogas and Biomethane Potential in the State of São Paulo by FIESP, 2024.

BRAZIL: BIOGAS POTENTIAL BEING DEVELOPED

**Brazilian
Biomethane
potential**

120 million m³/day



Brazil produces biogas **exclusively** from organic residues

Anaerobic digestion is a natural and sustainable process that transforms organic residues into **renewable energy** and not relying on any energy crops.



SUGAR CANE
INDUSTRY



AGRICULTURE



ANIMAL
MANURE

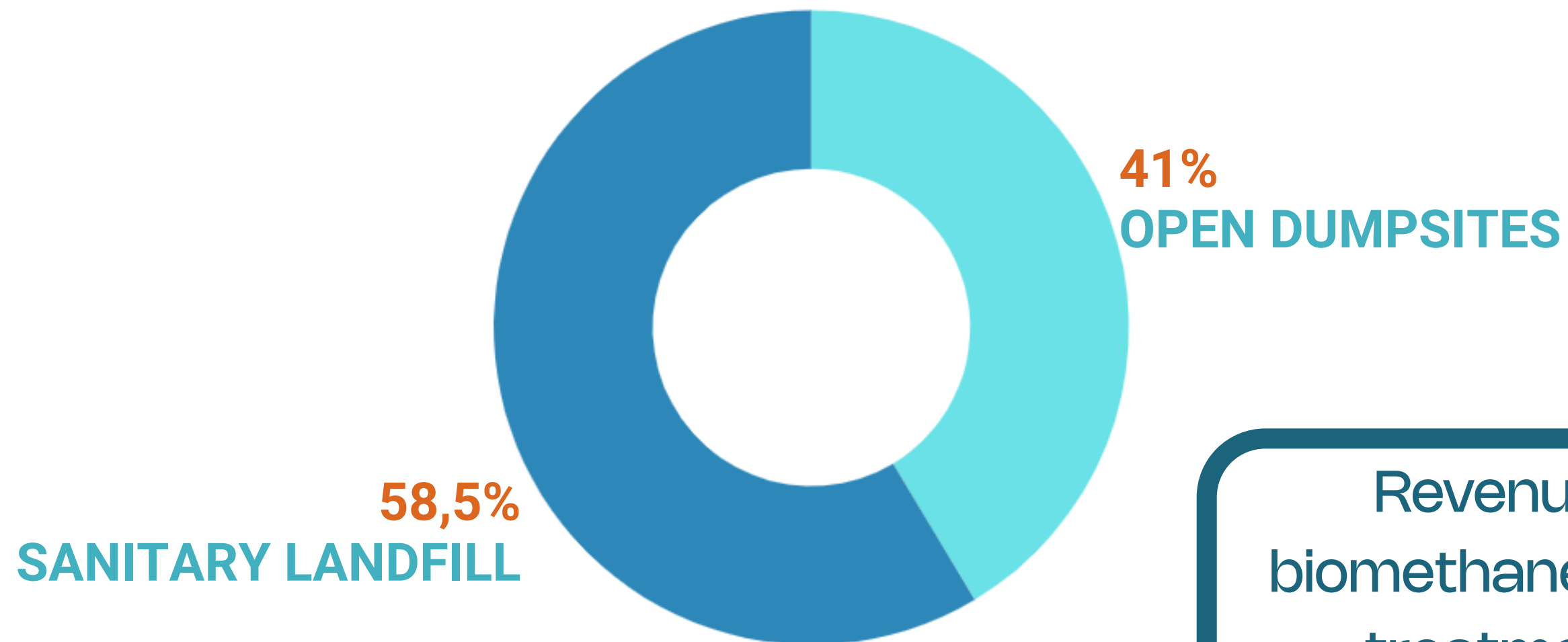


SANITATION

MSW GENERATION IN BRAZIL

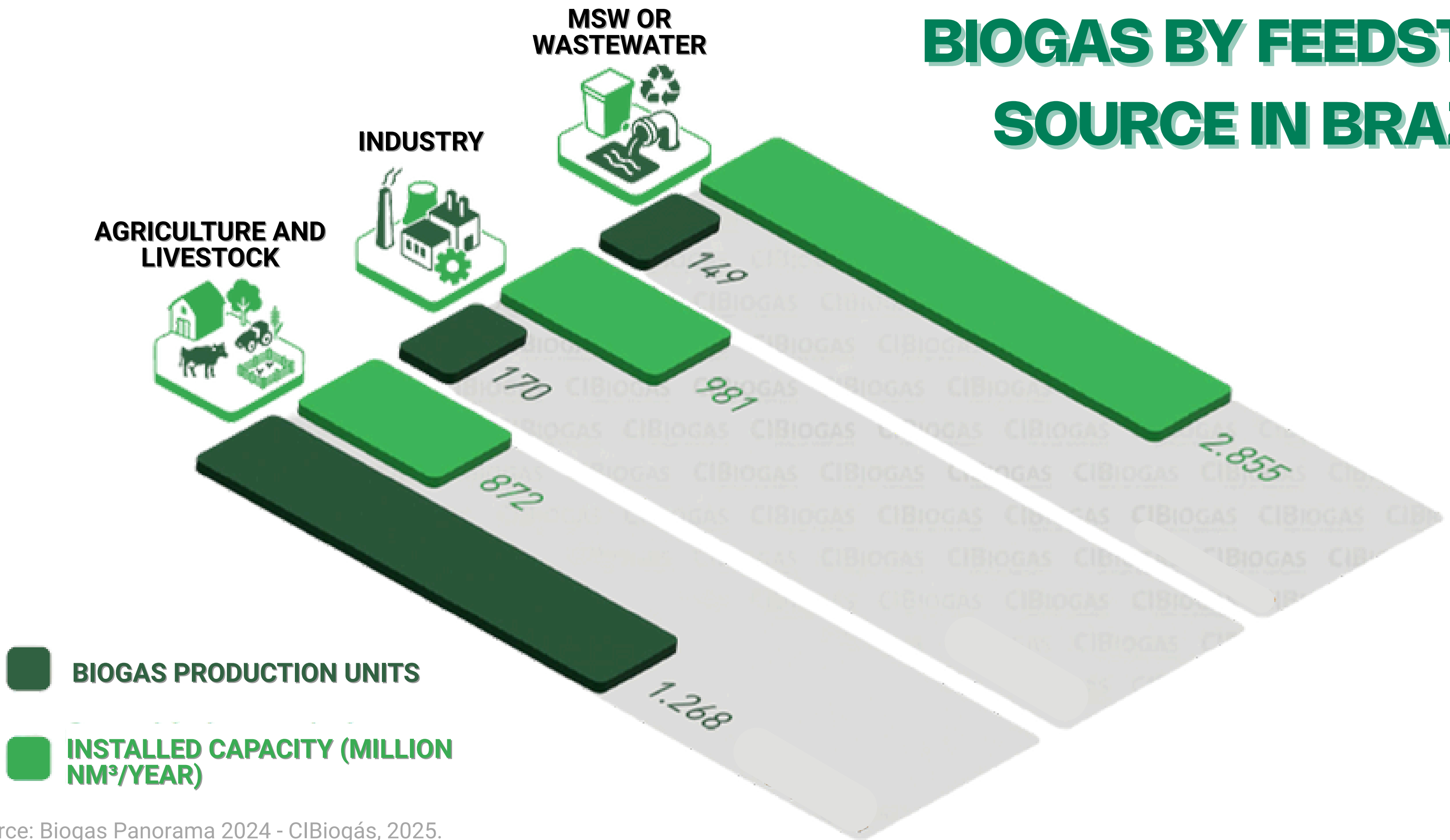
69.3 MILLION TONS


Brazil: the fifth largest waste generator in the world.




Revenue from biogas and biomethane can make the proper treatment of urban waste economically viable.

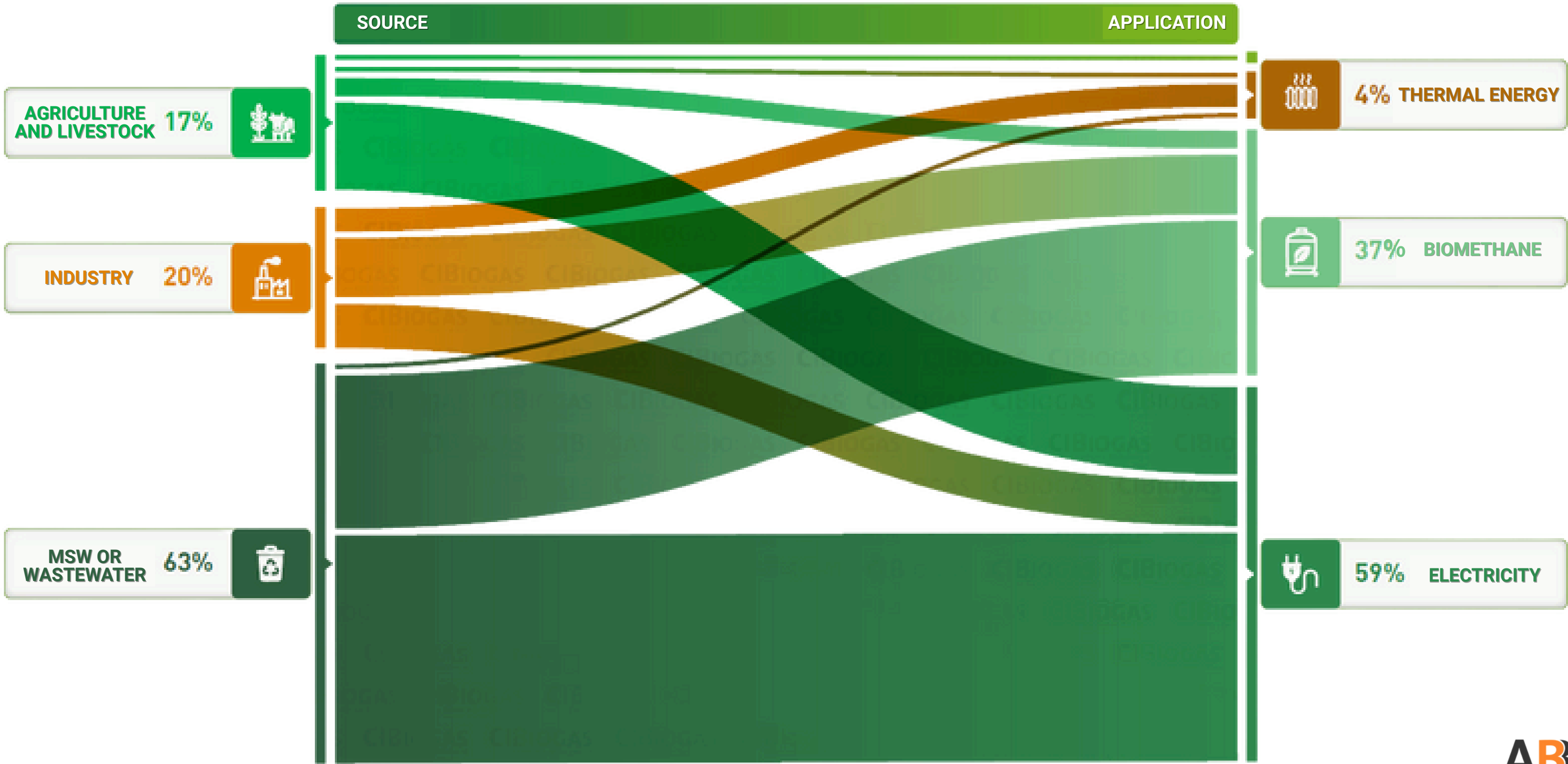
BIOGAS BY FEEDSTOCK SOURCE IN BRAZIL



 BIOGAS PRODUCTION UNITS

 INSTALLED CAPACITY (MILLION NM³/YEAR)

SOURCE BY FEEDSTOCK AND DESTINATION BY MAIN USE



EQUIVALENT POTENTIALS

Biogas: 216 million m³/day
Biomethane: 120 million m³/day

ENERGY AUTONOMY

PRODUCT	IMPORTED (Mm ³)
NATURAL GAS	8,412
LPG	3,38
DIESEL	14,32

DIESEL
60.3% of the demand for 2024

LPG
4.7 times the demand for 2024

ELECTRICITY
30.2% of consumption in 2024

UREA
30x to agricultural requirements

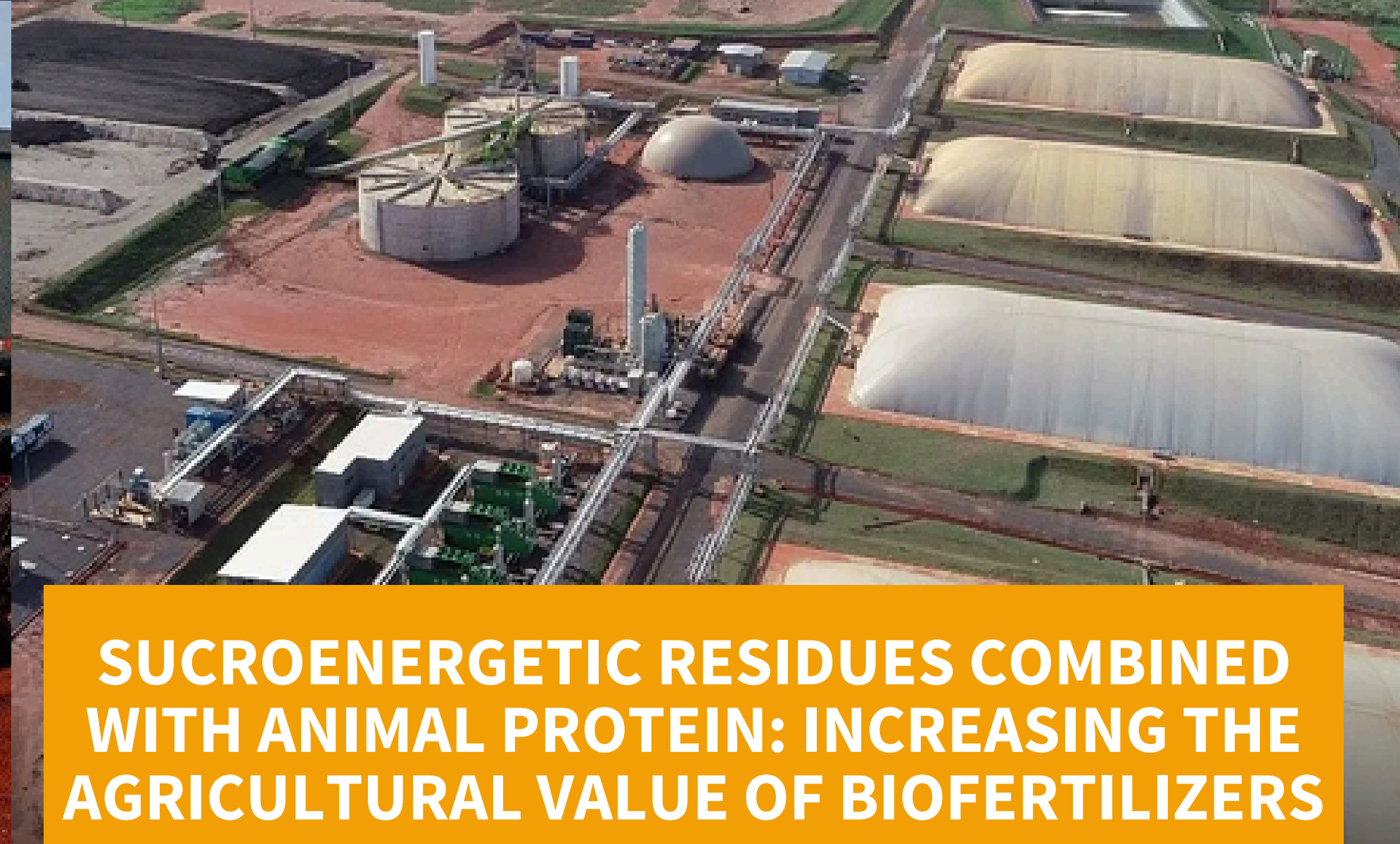
Biomethane has the potential to substitute approximately
five times the volume of imported natural gas, LPG, and diesel.

BIOMETHANE OPPORTUNITIES FOR BRAZIL

-642 mi t CO₂e

798 thousand jobs

R\$ 348 billion in investments



SUCROENERGETIC RESIDUES COMBINED WITH ANIMAL PROTEIN: INCREASING THE AGRICULTURAL VALUE OF BIOFERTILIZERS



COCAL – NARANDIBA

Narandiba, SP - Brasil



- 30 pieces of agricultural equipment
- 30 biomethane-powered trucks to transport ethanol to the Port of Santos (SP)

Substrate:
Sugarcane industry residues

Biomethane Volume:
27.113 m³/day

**AVOID THE EMISSION OF 100
THOUSAND TCO₂EQ**

CIRCULAR ECONOMY: TRANSPORTATION AND ELECTRICAL ENERGY

- 2 trucks 100% Biomethane;
- 4 hybrid trucks: Biomethane and Diesel;
- 4 motor pumps;
- 123 light vehicles with Biomethane,


ADECOAGRO

Ivinhema, MS - Brasil

 **adecoagro**

Substrate:
Sugarcane industry residues

Biomethane Volume:
6.600 m³/day



**AVOIDS THE EMISSION OF
APPROXIMATELY 170,000 TCO2EQ**

**INDUSTRIAL USE: INDUSTRIAL
CONSUMERS IN THE CHEMICAL
AND GLASS SEGMENTS**



ZEG BIOGÁS

São José dos Campos, SP - Brasil



Substrate:
MSW

Biomethane Volume:
30.000 m³/day



**ANNUAL REDUCTION OF 630
TCO₂EQ**

**INDUSTRIAL USE: OVENS AND
FORGES FOR METALLURGICAL
PRODUCTION AT AESA
AUTOMOLAS**



Geo bio gas&carbon

Tamboara, PR - Brasil



bio gas&carbon



Substrate:
Agro-industrial residues

Biomethane Volume:
86.880 m³/dia



**CIRCULAR ECONOMY: 5
THOUSAND TONS/YEAR OF
RENEWABLE AMMONIA**



YARA FERTILIZANTES

Cubatão, SP - Brasil



raízen

Substrate:
Sugarcane industry residues

Biomethane Volume:
20.000 m³/day

Brazil's National Biofuels Policy



Law 13.576/2017

Objective:

- Promote the predictable and sustainable expansion of biofuels production and use in Brazil, contributing to the reduction of greenhouse gas (GHG) emissions in the transportation sector.

How It Works?

- **Production Certification**
 - Biofuel plants are certified based on their carbon intensity (gCO₂eq/MJ).
 - The calculation is performed using RenovaCalc, the official tool developed by ANP.
- **Issuance of Decarbonization Credits (CBIOs)**
 - Each certified liter of biofuel generates a proportional number of CBIOs, according to its environmental performance.
 - 1 CBIO = 1 metric ton of CO₂ equivalent avoided.
- **Compliance with Annual Targets**
 - Fossil fuel distributors must purchase CBIOs to meet annual decarbonization targets set by the federal government.

National Program for Decarbonization of Natural Gas Producers and Importers and Incentive to Biomethane



Law 14.993/2024

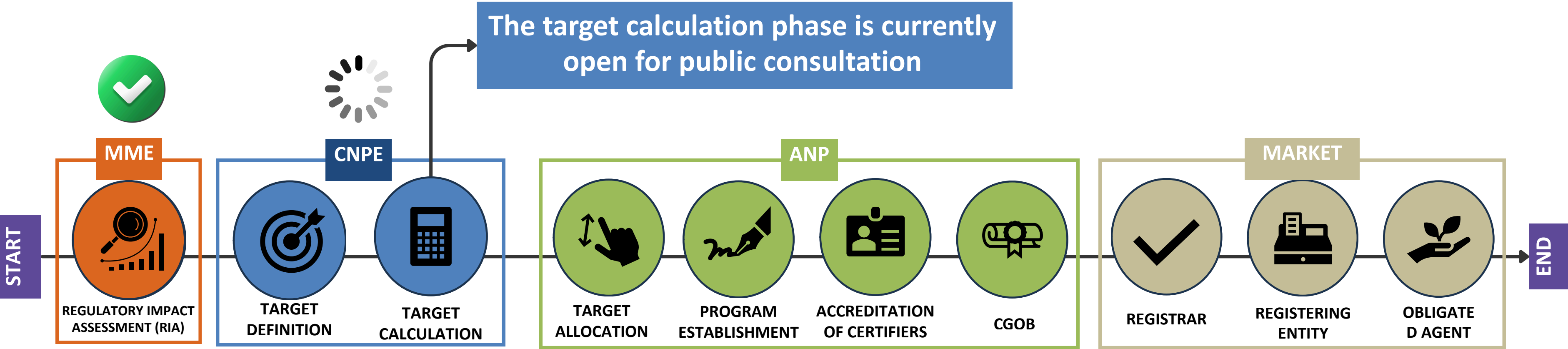
Objective:

- Promote the reduction of GHG emissions in the natural gas market through the incorporation of biomethane or the purchase of Biomethane Guarantee of Origin Certificates (CFOB).

How It Works?

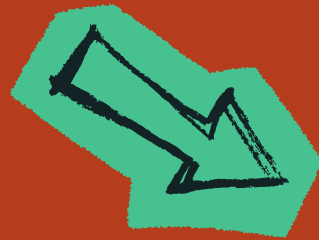
- Decarbonization target defined annually by the CNPE (from 1% up to 10%, starting in 2026).
- Compliance achieved through the purchase or use of biomethane or CFOBs, which ensure traceability and verified sustainability.
- Obligated agents: natural gas producers and importers (small agents are exempt).
- Not a volumetric mandate – compliance can be achieved solely through certificates.
- CFOB: backed by the volume of biomethane produced or imported, ensuring traceability, transparency, credibility, and fungibility.
- Trading: certificates can be freely traded, including in organized markets and auctions.

Implementation Steps of the Fuel of the Future Program



TAX REFORM

Guaranteed competitive advantage for biofuels



Reduction of 10% to 60% in taxes

Next steps: Monitor the drafting of the decree that will regulate the tax reform and the application of the tax differential

State Initiatives for Public Transport Decarbonization Using Biomethane

BIOSP PROGRAM: DECREE Nº 64.519/2025

Goal: Replace diesel buses with biomethane-powered vehicles in São Paulo.

How:

- Implemented through addenda to concession contracts.
- Ensures economic balance for operators.
- Establishes rules for supply and distribution chain.
- Builds a foundation for sustainable urban mobility.

BUS FLEET DECARBONIZATION PROGRAM IN GOIÂNIA


Goal: Gradually replace buses in the Metropolitan Region with biomethane-powered vehicles.

Implementation:

- Starts in 2025, with pilot buses and refueling stations.
- Aims to renew ~500 vehicles by 2026.
- Strengthens the local biomethane market and reduces GHG emissions.

ICMS Agreement No. 24/2025

- Full ICMS exemption for biomethane used in public transport (RMTC).
- • Up to 95% reduction for CNG operations.



ABiogás

Associação Brasileira do Biogás

RENATA ISFER
EXECUTIVE PRESIDENT

