



## The company that

# invests most

#### in Minas Gerais

- † 100% renewable
- Benchmark for ESG
- Leadership in the energy transition

- Brazil's largest integrated power company
- → Powering development in Minas Gerais State
- → Biggest incentivator of culture in Minas



#### CEMIG



#### Distribution

Largest electricity distribution company\*

**558,000** km (346,700 miles) of distribution network

**9.2 million** clients

\* by total length of network



#### **Transmission**

4<sup>th</sup> largest transmission company\* 5,017 km (3,117 miles) 52 substations

\* By regulatory transmission revenue (RAP)



#### Generation

6<sup>th</sup> largest generation company\*

5.3 GW - 100% renewable69 generating plants

\*By installed capacity



#### **Trading**

Brazil's largest electricity trader\*

**15 %** market share

\*by market share



#### **Natural** gas

**2.8 million** m³ daily **82,000** clients

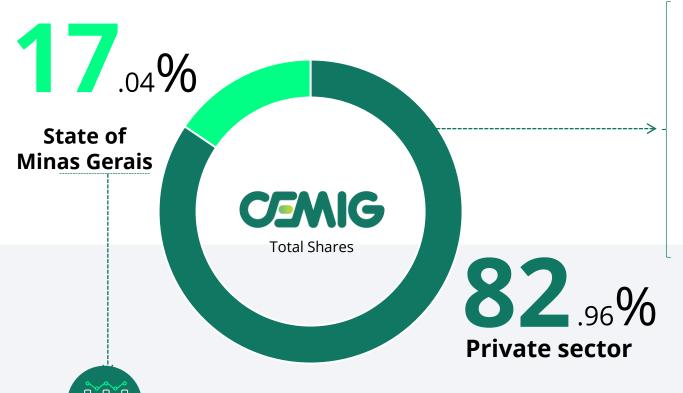


# **Distributed** generation

Investing **R\$ 3.2** billion by 2027 Adding **540** MWp



#### STOCKHOLDING STRUCTURE



**Minas Gerais State government** 

has stockholding control, with

50.97% of the common shares.

Brazilian private sector	32.02%
FIA Dinâmica	15.97%
Other	16.05%
Non-Brazilian private sector	45.50%
ADRs	9.05%
Other	36,45%
Other stockholders	5.44%

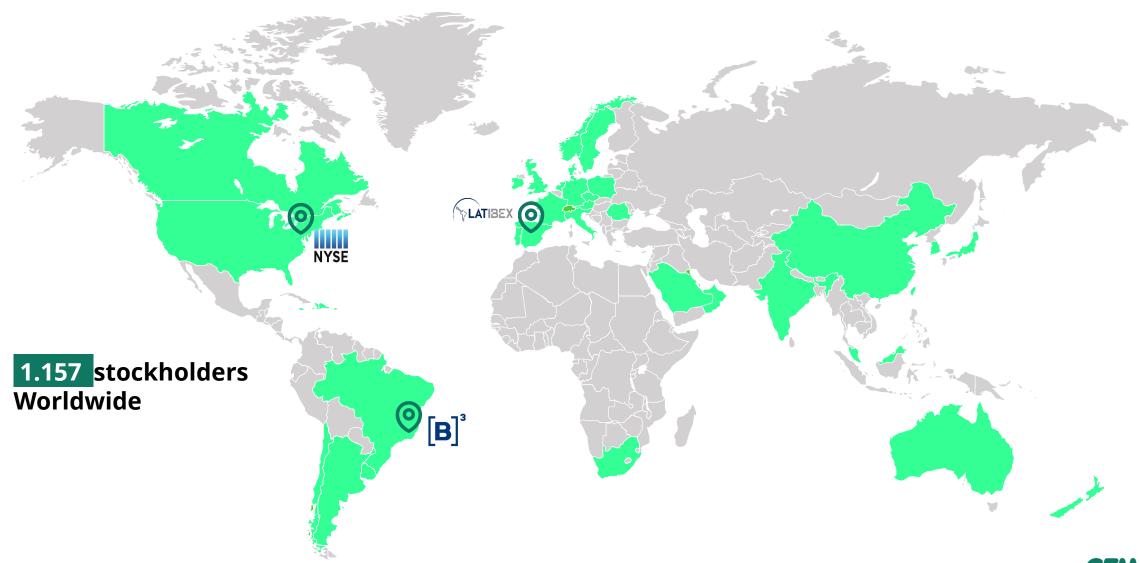


#### Solid dividends policy

**Payout - 50%** 

Guaranteed minimum dividend of R\$ 0.50 per preferred share

#### **INVESTORS ON ALL CONTINENTS**



# BUSINESS AND RESULTS

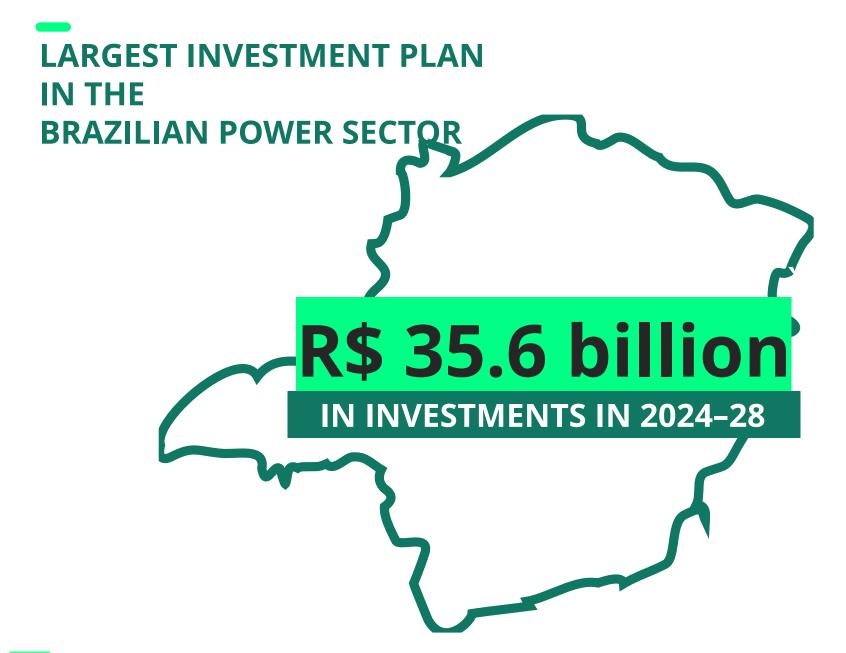
#### **STRATEGY**

Focus on Minas Gerais, in

- electricity distribution, transmission and trading,
- and distribution of gas
- in all of these, leading in customer satisfaction and safety
- with regulatory levels of efficiency, through modern, sustainable management with private-sector logic
- making the largest investments
   in Minas Gerais in Cemig's history.









R\$ 23.0 bn DISTRIBUTION



R\$ 2.1 bn GENERATION



R\$ 3.8 bn TRANSMISSION



**R\$ 3.3 bn**SOLAR DISTRIBUTED
GENERATION



**R\$ 1.8 bn**NATURAL GAS



R\$ 1.6 bn INNOVATION



\* Source: João Pinheiro Foundation.



#### **HOW THE STRATEGY HAS CHANGED**

#### 2009 - 2018

Investments in minority stakes and outside the core businesses reduced competitiveness

R\$ 34 billion invested – but net R\$ 12 billion value destroyed

**Low investment** in the regulated businesses – average R\$ 1.0 billion / year

Loss of more than 50% in installed generation capacity

Unmet demand reached almost 50% of Cemig D's load

#### **After 2019**

Disinvestment of minority holdings, recovering cash of more than R\$ 7.1 billion

Largest investment program in Cemig's history:

R\$ 35,6 bn in 2024–28; focus on the concession

Investments in generation and transmission resumed

Unmet demand expected to be less than 10% of total load at the end of this cycle of investment

#### **SHARE APPRECIATION**

Present market cap:



R\$ 2 billion

Market cap in Oct. 2018:

R\$ 10.1 billion

Dividends of over R\$ 7.2 billion paid since 2019

# MAIS ENERGIA ('MORE ENERGY') program

In 2027, Cemig will have 615 substations

200 new substations by 2027

(addition of 50%)

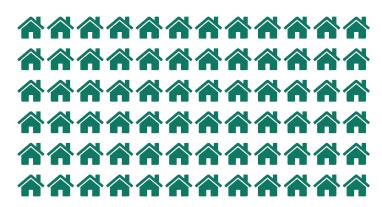
- also generating jobs and income

New substations built by 2018:



10 substations

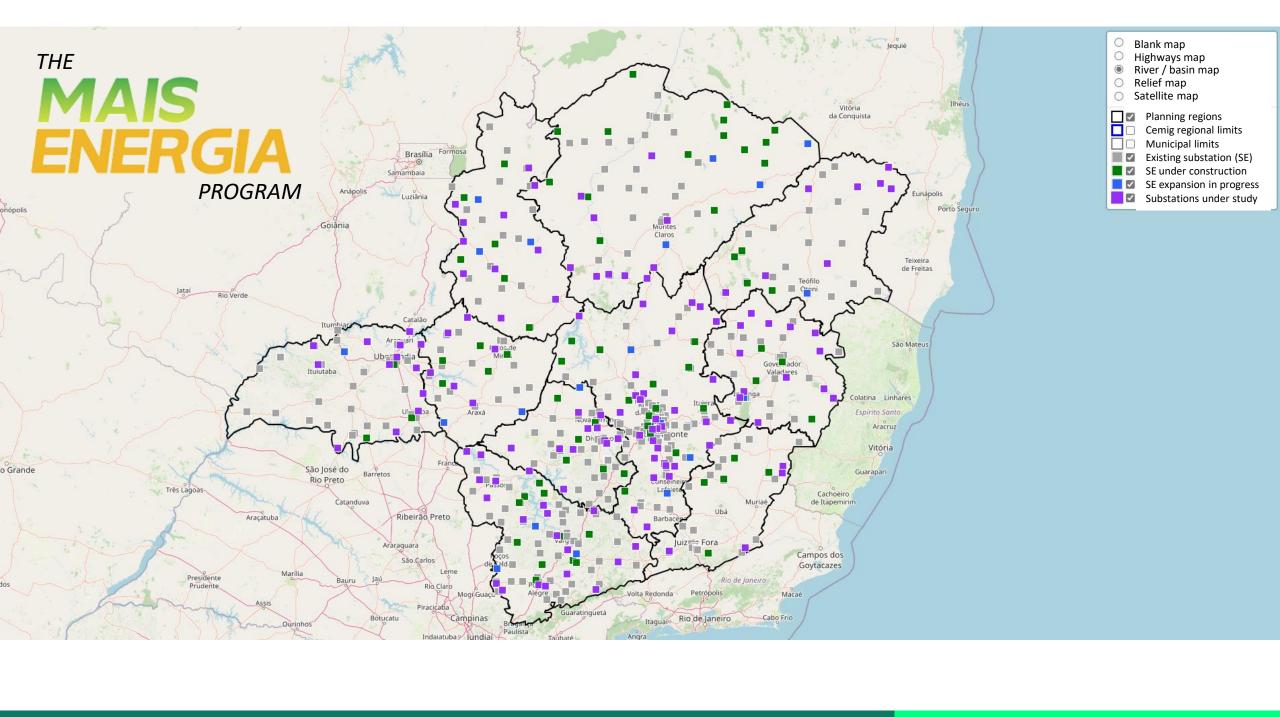
New substations: present average



72 substations

For more info:





#### MAIS ENERGIA ('MORE ENERGY') program



Buritizeiro before *Mais Energia* 



Buritizeiro after Mais Energia



#### **MINAS 3-PHASE PROGRAM**

Brings opportunities to the deep countryside, transforming subsistence farming into **agribusiness** 

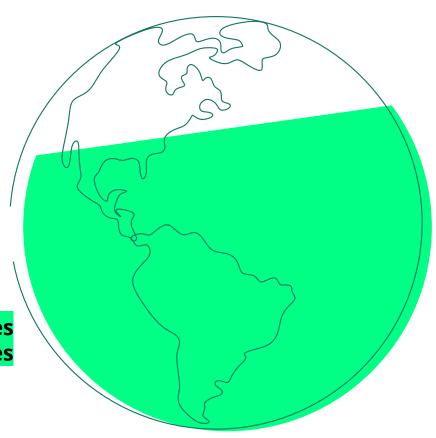
For more info

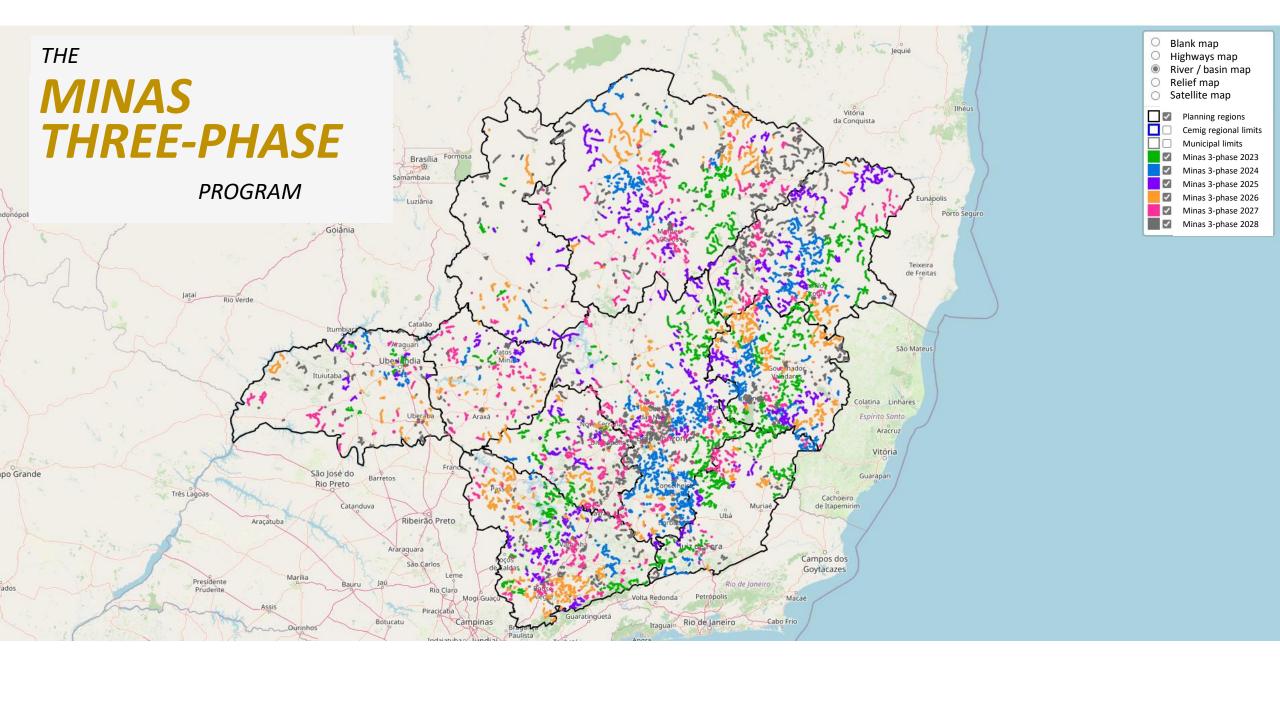
3-Phase program:

18,640 miles

by 2027

Minas Gerais highway network: **19,260 miles** Circumference of the Earth: **25,000 miles** 





# 100% RENEWABLE GENERATION

4

**Expansion of** the portfolio by **1.9 GW** by 2032, after **two decades** without investments in expansion of generation



#### **100% RENEWABLE GENERATION**



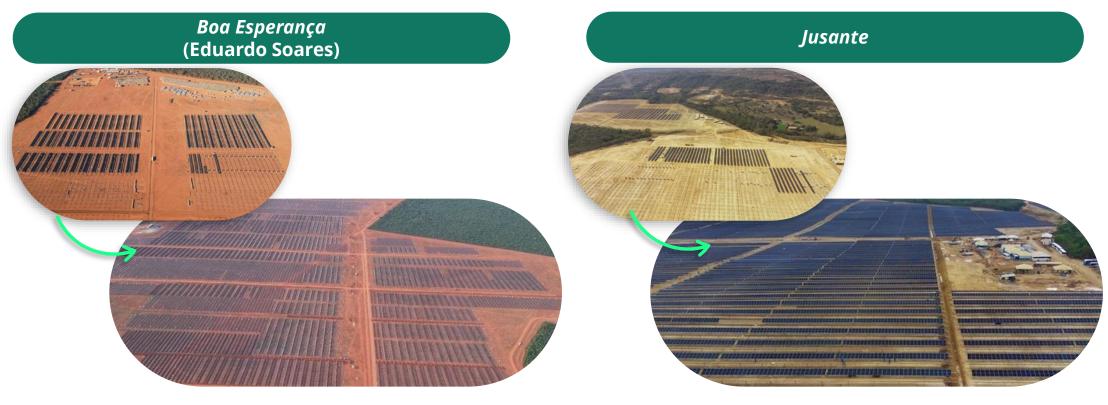


Cajuru: Solar Distributed
Generation plant: 39MWp

- Três Marias, Minas Gerais.
- Expected start of operation: 2026

- Araguari, Minas Gerais
- Expected start of operation: 2026
- Carmo do Cajuru, Minas Gerais
- Expected start of operation: 2025

#### **100% RENEWABLE GENERATION**



- Municipality: Montes Claros, Minas Gerais
- Planned operation date: Dec. 2023

- Municipality: Três Marias, Minas Gerais.
- Planned operation date: Dec. 2023

#### TRANSMISSION: EXPANSION RESUMED

- Transmission auction win
- · after **22** years

165 km (102-mile) transmission line between

- Governador Valadares (East of Minas) and
- Verona (Espírito Santo)





**ACTION FOR 2023 - 2027** 



# POWERING GASMIG'S PRESENCE IN MINAS



- Serve 2 new meso-regions of Minas Gerais
- Expand use of the existing **pipeline network**
- Add 86,000 new clients
- **Build 1,331km** (815 miles) of network
- Study use of Biomethane in distribution

#### **CENTER-WEST PROJECT**

- 300km (186 miles) of network to be built
- 24 months of works from 2023

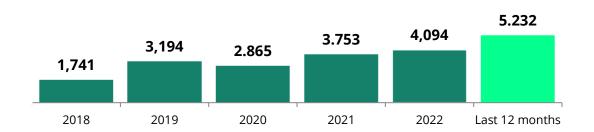
#### **EXTREMA PROJECT - POUSO ALEGRE**

- Connection to trunk pipelines
- 81 miles of network to be built
- Works as from 2025

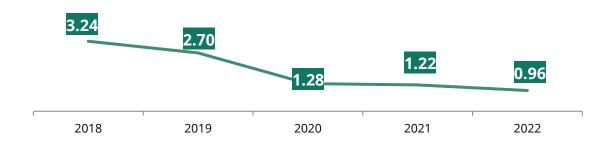
#### **EXCELLENCE IN FINANCIAL MANAGEMENT**



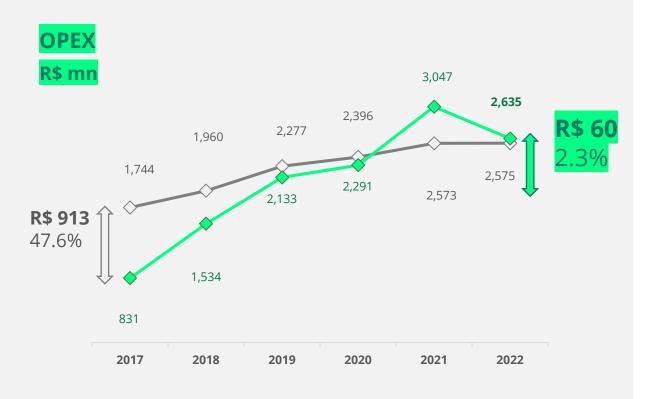


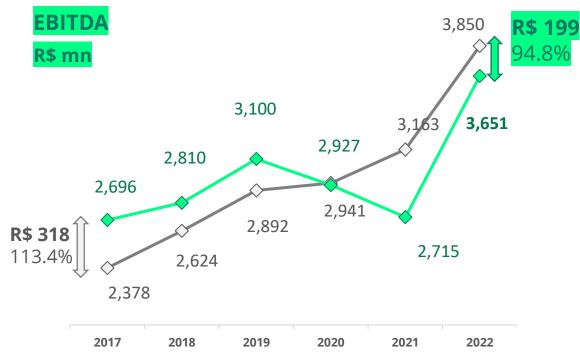


#### Net debt / Ebitda



#### **MEETING REGULATORY TARGETS**



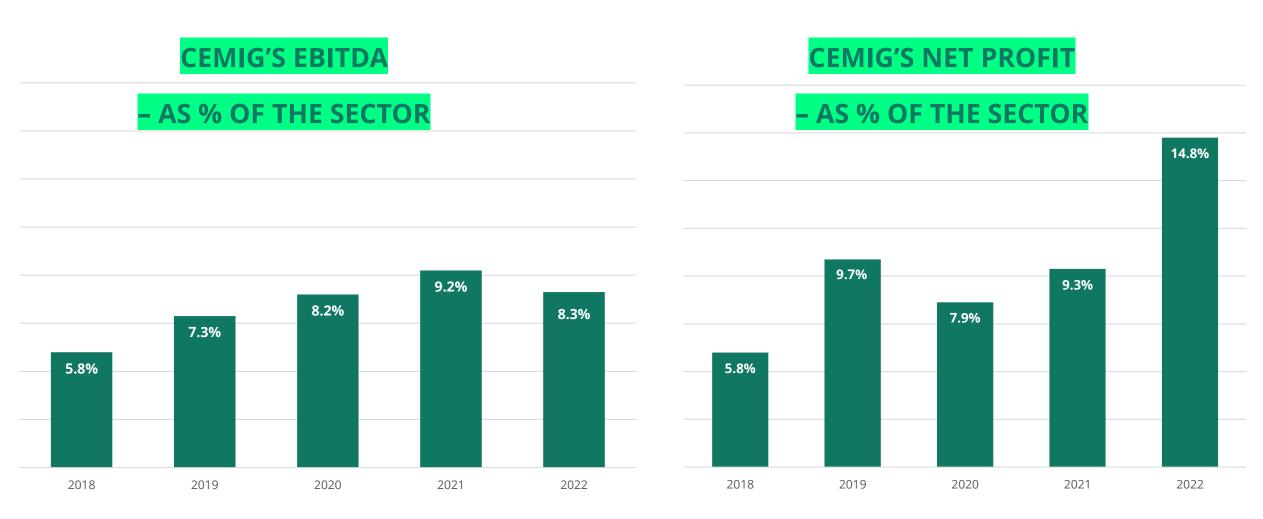


→Regulatory → Realized

Annual **Opex and Ebitda** within regulatory parameters

→Regulatory → Realized

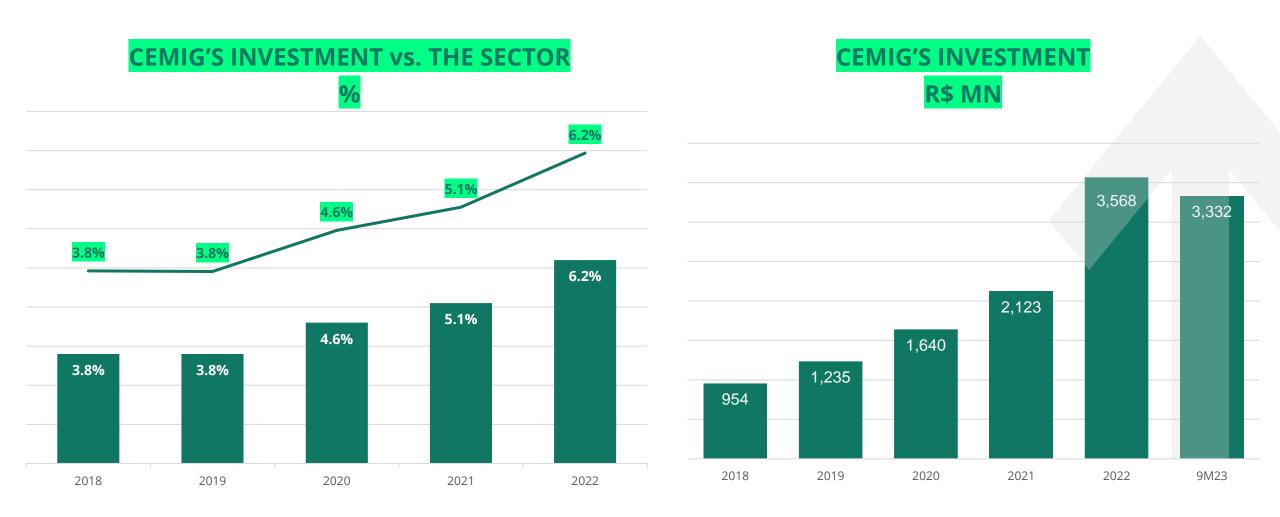
#### **CEMIG'S SHARE IN BRAZIL'S POWER SECTOR**



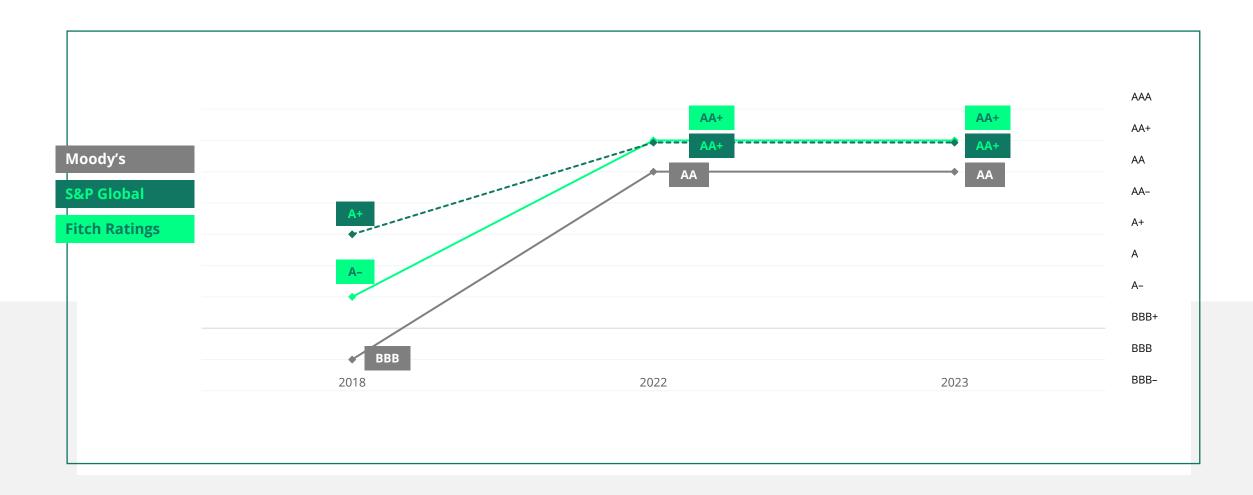
<sup>\* 2021</sup> Ebitda had positive effect of GSF renegotiation.

Source: *Economática* data for 17 main companies in the sector.

#### **CEMIG'S SHARE IN BRAZIL'S POWER SECTOR**



#### **CEMIG'S INVESTMENT RATINGS**



SUSTAINABILITY
AND
SOCIAL
RESPONSIBILITY

#### **BENCHMARK IN ESG**

- Company's strategy and actions aligned with best practices
- Committed to achieving NET ZERO by 2040
- Independent Board of Directors (DJSI)

ENERGY 100%
CLEAN AND RENEWABLE

97% ± 2% ± 1%

Dow Jones
Sustainability Indices
In collaboration with

24 years in the index – the only power company in the Americas included

ISEB3

Included in this index since it was created

Sustainability Yearbook

Member 2022

#### S&P Global

Ranked 15<sup>th</sup> of the 220 companies in the sector evaluated



**Best Brazilian company** 



Rating A
Highest rated in the
Brazilian electricity sector



Score 30% above power sector average



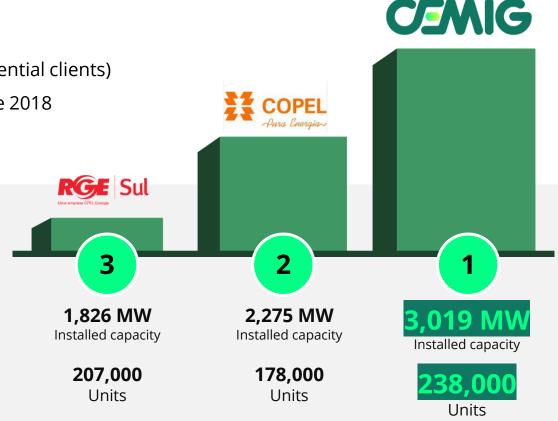
Top score in eco-efficiency



#### **SOLAR DISTRIBUTED GENERATION:**

- Cemig has connected around 238,000 distributed generation units
- Record 7 GW connected and approved (1.5x demand of Cemig residential clients)
- Cemig has invested more than R\$ 2.4 billion in DG connections since 2018
- Connections/year grew 190% from 2009 to 2022

#### **ACCELERATING GROWTH**



## THE MINAS LED PROJECT

From 2009 to 2019, no municipality received support for LED street lighting

2009 2018



## ENERGY EFFICIENCY

#### INFRASTRUCTURE IMPROVEMENT PROGRAM THAT ALLOWS LOWER ENERGY CONSUMPTION

#### **BENEFICIARIES:**

355
hospitals

165,000
families in low-income communities

3,400 schools run by MG State

18,000 rural families

#### **SOCIAL RESPONSIBILITY**

**1.3 million** families benefited by the Social Tariff, with discounts of up to 65%

240,000

families to benefit from program to regularize power supply in low-income communities - focus on safety, citizenship, sustainability

beneficiaries of programs supporting 100,000 sport, infancy, adolescents and protecting the elderly





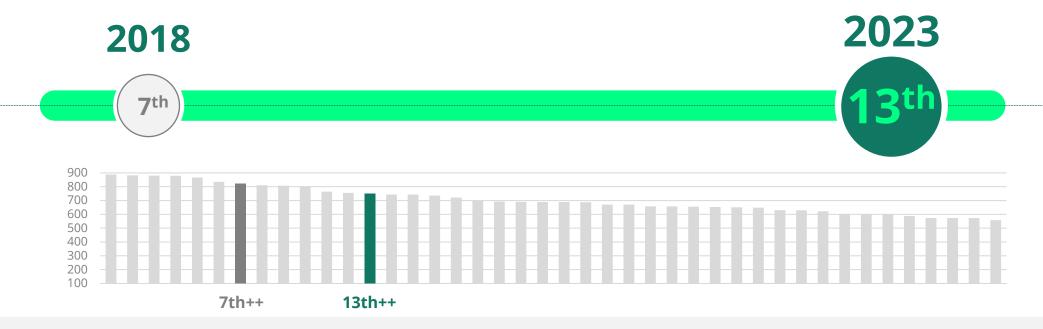
## Largest incentivator of culture in Minas Gerais

- Liberty Square in Belo Horizonte: Cemig Pinacotheca and Cemig Cultural Heritage Center
- Cemig Grand Theatre Palace of the Arts
- Humberto Mauro Cinema
- Minas Gerais Philharmonic Orchestra
- Minas Gerais Symphony Orchestra
- Grupo Corpo
- Galpão
- A Última Sessão de Música



#### **ENERGY TARIFF vs. MAIN DISTRIBUTORS**

# RANKING OF CAPTIVE CUSTOMER'S TARIFF (R\$/MWH)



#### **CEMIG'S TARIFF DROPPED 6 PLACES SINCE 2018**

(LOWER POSITION IN THE RANKING = LOWER TARIFF CHARGED)

# DECARBONIZATION AND OTHER JOURNEYS

### **MAJOR TRENDS**

#### **DIGITALIZATION**

- · Large-scale data
- Artificial intelligence
- Cybersecurity, with highly connected system
- Robotization

#### **ELECTRIFICATION**

- Decarbonization
- Most-demanded infrastructure
- New transport model
- New generation technologies

#### **IMPORTANCE OF THE GRID**

- Integration of renewables
- Decentralization
- Stabilization of supply and demand
- Smart Grid

#### **BUSINESS MODEL**

- Opening of the market
- Customized energy contracts
- Constant improvement of the legal framework
- Price must give appropriate signals

# THE TRANSITION TO THE LOW CARBON ECONOMY

- Investments in infrastructure for decarbonization and electrification
- Focus on availability, reliability and efficiency in the power grid
- Development of renewable energy projects (e.g. wind, solar)
- Smart grid technology to improve efficiency and reliability of the grid.
- Partnerships with universities and startups for new energy solutions
- Investment in R&D for progress in renewable energy / energy efficiency
- Investments in rural regions, clean energy, reforestation, and decarbonization – strengthening Brazil's potential in food, climate and energy security



# **TECHNOLOGY FOR CLEAN ENERGY**

#### **ARTIFICIAL INTELLIGENCE**

- 'Copilots' for operation and dispatch
- Trading with use of algorithms
- · Personal security monitoring
- Language model for interaction with clients
- Training with virtual reality glasses

#### **AGRIVOLTAIC GENERATION**

- Solar panel energy integrated with land use
- Agricultural production
- Less water consumption

#### **SMART GRID**

- 1.5 million smart meters
- More than 200 new 100%-digitalized substations

#### **FLOATING GENERATION**

 Floating solar plants at commercial scale – 3 large sustainable projects

#### **BATTERIES AND STORAGE**

- Small-scale batteries
- Flow batteries



#### **GREEN INNOVATION**

- Green hydrogen: Partnership with Itajubá University;
   production of hydrolyzers
- Green transformers using vegetable oil
- Brazil's first distributor using Green Cable
- Every 10km of cable cuts CO<sub>2</sub> emission by 1.8 ton

# TO TRANSFORM LIVES WITH OUR ENERGY

- Minas Gerais is Brazil's fastest-growing state Brazil.
  - Its % of Brazilian GDP rose from **8.7%** in 2013 to **9.3%** in 2022.
- Institutional stability for a favorable business environment
- Minas has abundant renewable natural resources, including water, sun and wind.
- It has the country's largest volume of hydroelectric power and solar generation.
- Cemig prepares for leadership in the energy transition, with 100% renewable energy to support new uses of electricity, such as green hydrogen, energy storage and green minerals.
- Cemig works to improve Brazil's energy, climate and food security
- Count on Cemig: Energy that transforms lives!

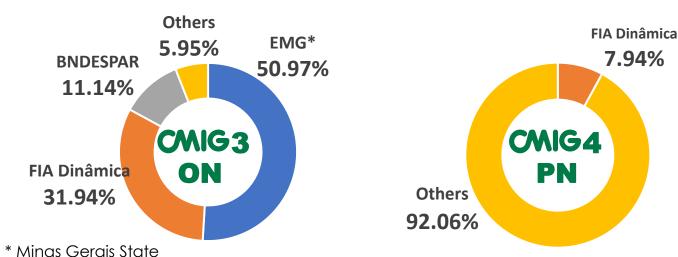


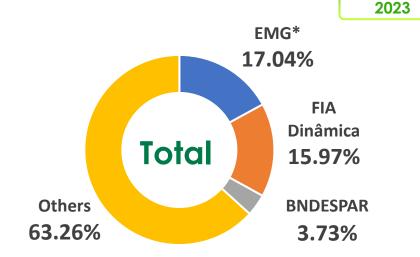
# THANK YOU!

CENIG

# **CEMIG AT A GLANCE**

## Shareholder structure - Based in State of Minas Gerais





January



## Among the most liquid stocks in Brazil's electricity sector

- Listed on New York, São Paulo and Madrid
- More than 330,000 shareholders in 36 countries
- Average daily trading volume in 2023
   R\$139.0 mn in B3 and US\$9.0mn (R\$44.5 mn) in NYSE



#### Solid dividend policy

- Payout 50%
- The minimum annual dividend guaranteed to the preferred shares – R\$0,50/share



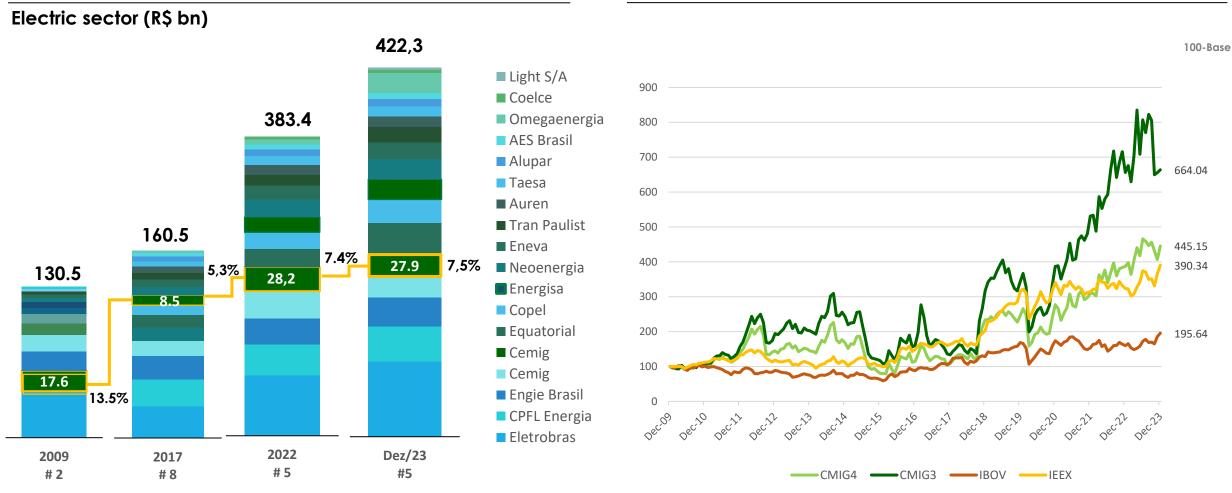
### **Best-in-Class Corporate Governance**

- Board of Directors eleven members
  - ✓ Ten members have the characteristics of an Independent Board Member, by the criteria adopted by the Dow Jones Sustainability Indexes (DJSI) / nine by IBGC
- Present for 24 years in the Dow Jones Sustainability Index (the only company in the sector in Latin America) and main indexes (ISEE, ICO2, IGCX, among others)

# **CEMIG - RECOVERY OF REPRESENTATIVENESS IN THE SECTOR**

## Market Cap

## **Stock Evolution**



Cemig position in the ranking 42

Source: Economática 11/13/2023 G

# SOLID DIVIDEND POLICY

**Shareholder** remuneration is **among the highest** in the industry.

Our dividend policy, payout de 50%, provides adequate remuneration to our

shareholders and allows us to execute our **Investment Plan** 

Shareholder remuneration in 2022

Total Earnings R\$2,233 million

2022 Yield Yield 8.46% 15.28%

Shareholder remuneration
To be paid with the mandatory minimum dividend for 2023

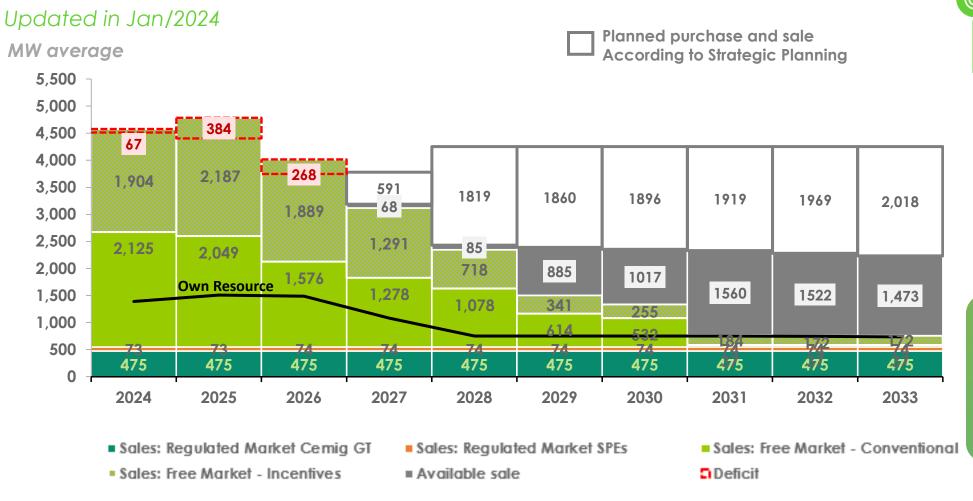
Total JCP R\$2.6 billion JCP R\$424 mn R\$0.19278/share

JCP R\$418 mn
R\$0.1899/share

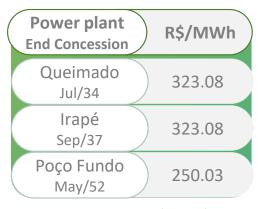
JCP R\$1.322 mm
R\$0,6001/share

CEMIG

# **CEMIG GROUP: SUPPLY AND DEMAND**







Prices - jul/23

RAG\* Lote D - R\$580 mm

Value for cycle 2023/2024. The main plants are entitled to RAG until January 2046

\*Annual generation revenue

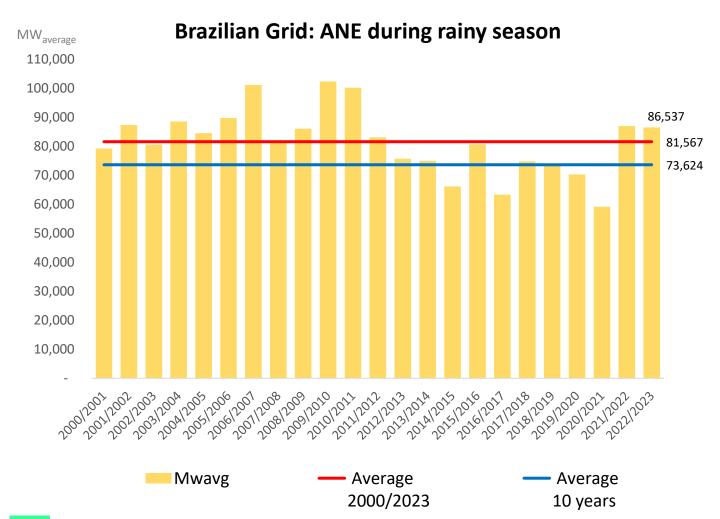
Cemig group - Considers the total availability of the Cemig group's generation companies (Cemig GT, Sá Carvalho, Horizontes, Cemig PCH, Rosal, Cemig Geração Três Marias, Cemig Geração Salto Grande, Cemig Geração Itutinga, Cemig Geração Camargos, Cemig Geração Leste, Cemig Geração Oeste, Cemig Geração Sul), plus purchases from outside sources.

Note: 2024: balance with the effect of the GSF forecast for the year of 0.88. From 2025: structural energy balance

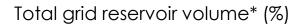


# **AFFLUENT NATURAL ENERGY (ANE)**

Scale of the total Affluent Natural Energy in reservoirs of Brazil's National Grid



#### Useful volume stored in reservoirs





Source: Brazilian National Grid

\* Sum of usable volumes of all reservoirs, and all generation plants with reservoirs, in the National Grid.



# **TARIFF REVIEW AND READJUSTMENT**

Aneel approved tariff review in the Technical Note 12/2023 STR/ANEEL

Regulatory asset base (RAB)	2013	2018	2023
Remuneration Base – gross R\$	15,724	20,490	25,587
Remuneration Base – net R\$	5,849	8,906	15,200
Average depreciation rate	3.84 %	3.84%	3.95%
WACC	7.51%	8.09%	7.43%
Remuneration of the special obligations	-	149	272
CAIMI R\$	147	333	484
QRR R\$ - Depreciation (Gross RAB x Dep rate)	590	787	1,007
Remuneration of capital R\$ (Net RAB x WACC)	587	1,236	1,976



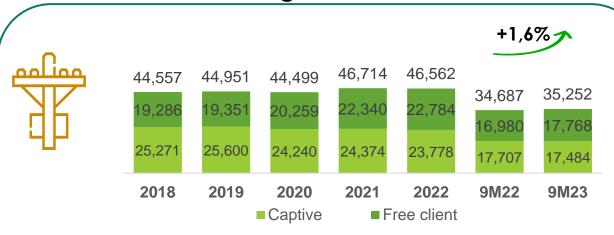
The tariff reviews occur every 5 years, and the next one will take place in May 2028





# CEMIG D'S MARKET AND DISTRIBUTED GENERATION

## Cemig D - market



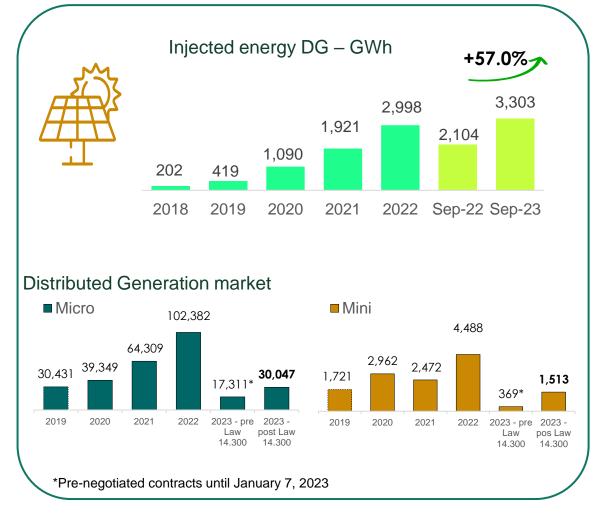


Connection of future loads of **2,681 MW** in progress

Cemig inaugurated **12 substations**; 15 more to be finalized in 2023

**Carmo do Rio Claro 2 substation** started operation - **R\$53** million investment, providing energy availability and quality to 61,000 people in Southeastern Minas Gerais

### **Distributed Generation market**





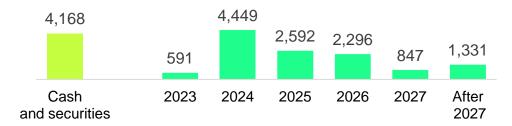
# **DEBT PROFILE - CONSOLIDATED**

## Debt and leverage remain low – ensuring financial sustainability to execute our investment program

Maturities timetable
Average tenor: 2.6 years

Net debt (Debt – Cash and securities): R\$7.9 billion

Total net debt (Net debt – Hedge): R\$7.6 billion

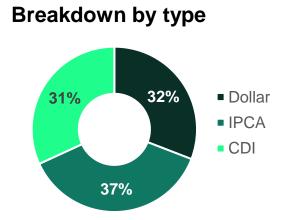


Debt in USD protected by hedge instrument, within an FX variation range – converted to % of Brazilian CDI rate.

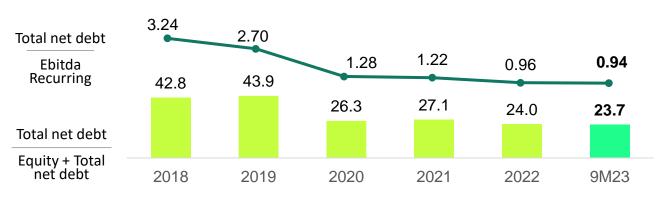
#### Cost of debt %







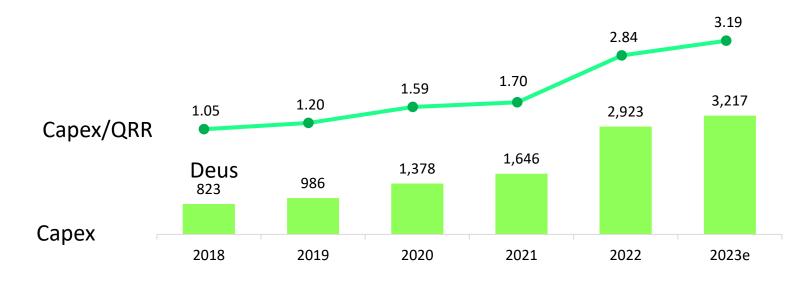
## Leverage %





# **CAPEX CEMIG D - EVOLUTION**

Investments with a Focus on Minas Gerais, Cemig starts investing 3X the regulatory depreciation



Prudent investments, recognized by the regulatory body, increase Net Remuneration Base

#### REMUNERATION BASE – NET R\$

2018	2019*	2020*	2021*	2022*	2023
8.906	9.302	9.834	10.966	11.656	15.200

Values adjusted by IPCA

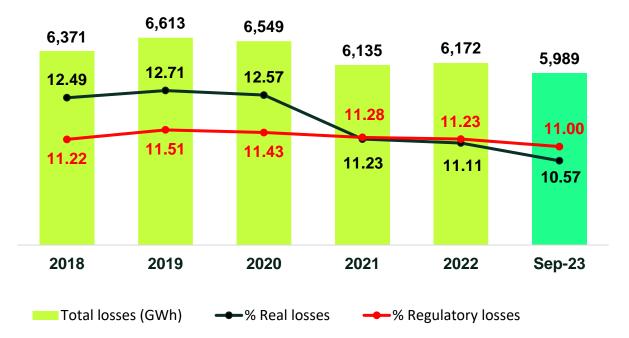


# **ENERGY LOSSES - CEMIG D**

#### **ENERGY LOSSES WITHIN REGULATORY LIMIT**

#### TOTAL LOSSES

12-month mobile window





Robust investments and actions of our Energy Recovery Plan have enabled losses to be kept below regulatory limits

## **COMPLETED INITIATIVES**

9M23



**288,000** inspections made - **76%** of total planned for 2023



**551,000** obsolete meters replaced, 91% of 2023 target



Conventional meters being continuously replaced by smart meters –52,000 by September 2023



Energia Legal Program: regularization for **8,000** families in low-income communities

