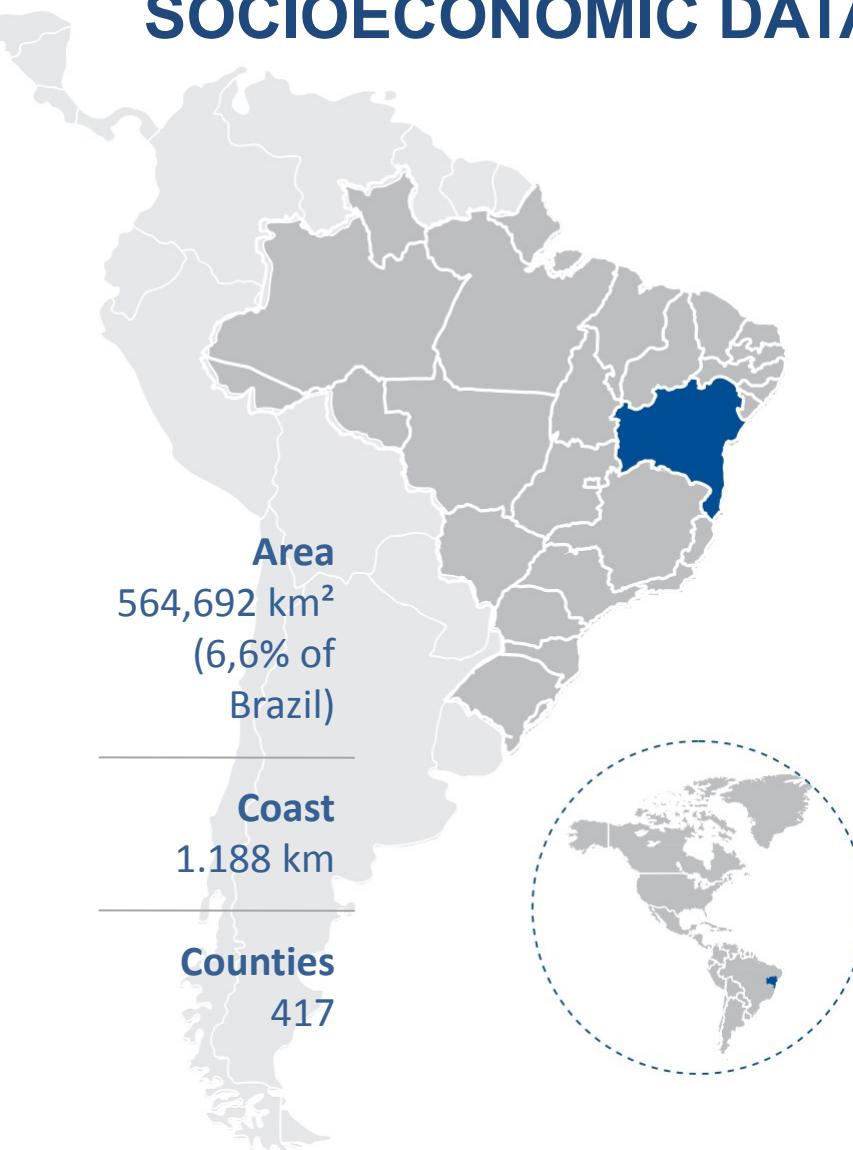


# BAHIA

INVESTMENT OPPORTUNITIES



# SOCIOECONOMIC DATA



## Business Flow (2018)

US\$ 16,7 bi

Exports +  
Imports

47,4%

Share of exports in relation to  
the total of the Northeast  
Region

3,7%

Share of exports in relation to  
the total of the Country

Source: SEI (2019)



## Job

246 mil

New jobs generated (2010-2019)

Source: SEI (2019)



## Degree of Urbanization (2017)

72,8% Bahia

98,1% Metropolitan Region  
of Salvador

Source: SEI (2019)



## Population

14,9 mi

IBGE (2018)

1<sup>a</sup> from northeast

4<sup>a</sup> from the  
country



## GDP (2018)

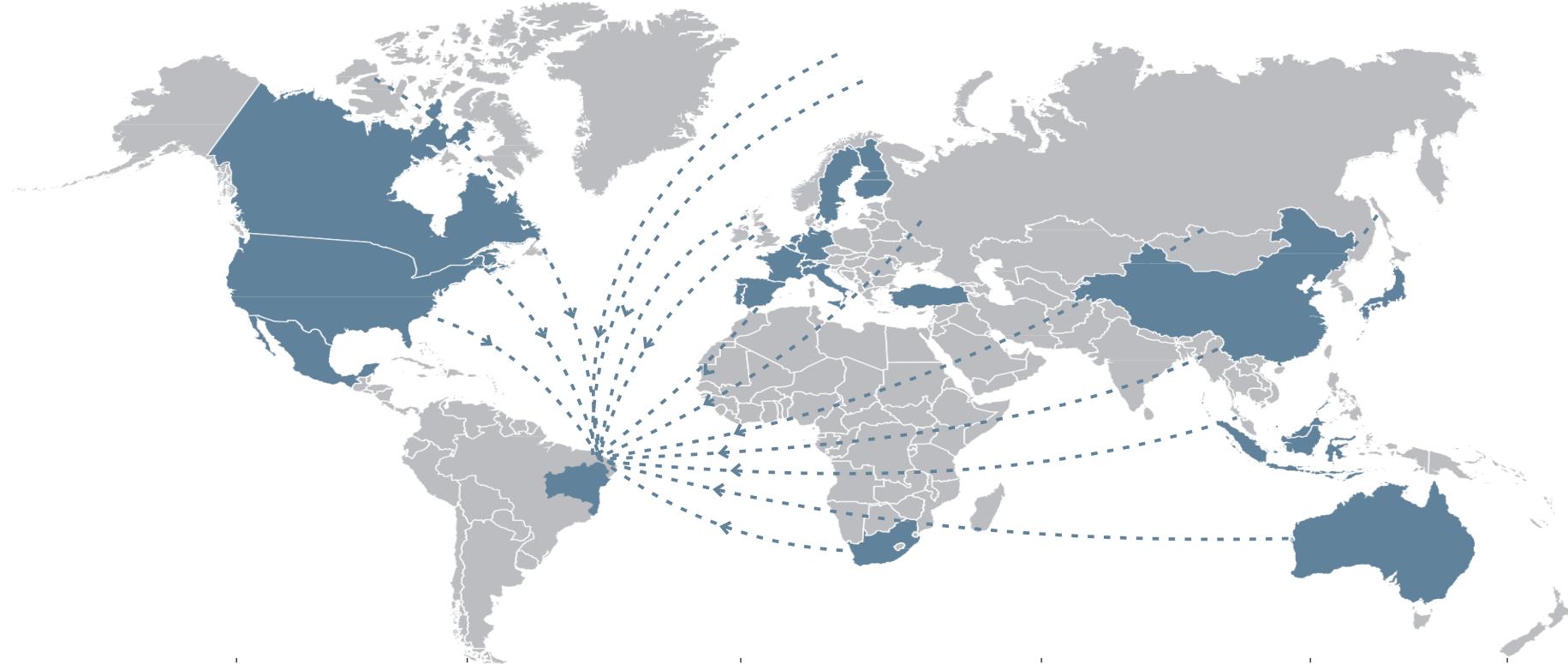
US\$ 73 bi

7<sup>a</sup> Country Economy

5<sup>a</sup> Preferred destination  
for foreign investments

Average dollar = R\$ 3,70  
Source: BACEN (2019)

# COUNTRIES INVESTING IN BAHIA



 **USA**  
Agroindustry, Wind Energy, Chemical, Plastic, Automotive, Cosmetic, Biofuel

 **Mexico**  
Chemical, Agroindustry

 **France**  
Wind Energy, Chemical, Agroindustry, Civil Construction

 **Finland**  
Cellulose

 **Sweden**  
Cellulose, Automotive

 **Netherlands**  
Agroindustry, Chemical

 **England**  
Mineração, Food and Beverage

 **Germany**  
Wind Energy, Automotive, Chemical, Petrochemical, Biofuel

 **Belgium**  
Chemical, Wind Energy, Metallurgical, Beverage

 **Spain**  
Wind Energy, Automotive (tyres), Trade and Services

 **Switzerland**  
Agroindustry, Power Generation

 **Portugal**  
Textile, Chemical, Civil Construction, Metallurgical, Solar Industry

 **Australia**  
Mining

 **Japan**  
Automotive, Electrical and Electronic

 **Indonesia**  
Cellulose

 **Thailand**  
Tobacco

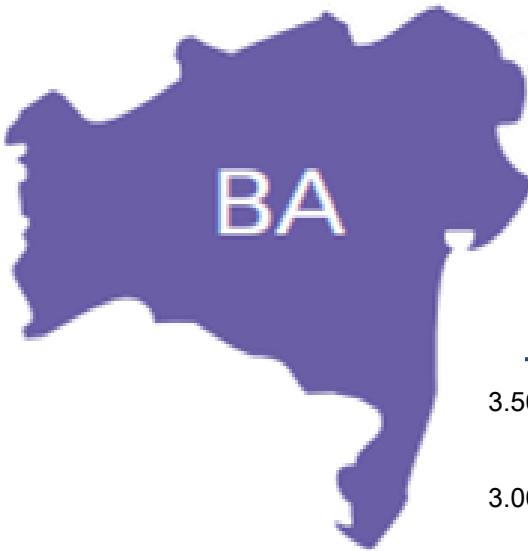
 **Turkey**  
Chemical

 **South Africa**  
Textile

 **Italy**  
Mechanical Metal, Chemical, Wind Energy, Furniture, Leather, Automotive, Footwear, Rubber

 **China**  
Agroindustry, Automotive, Mining

 **Canada**  
Automotive, Mining



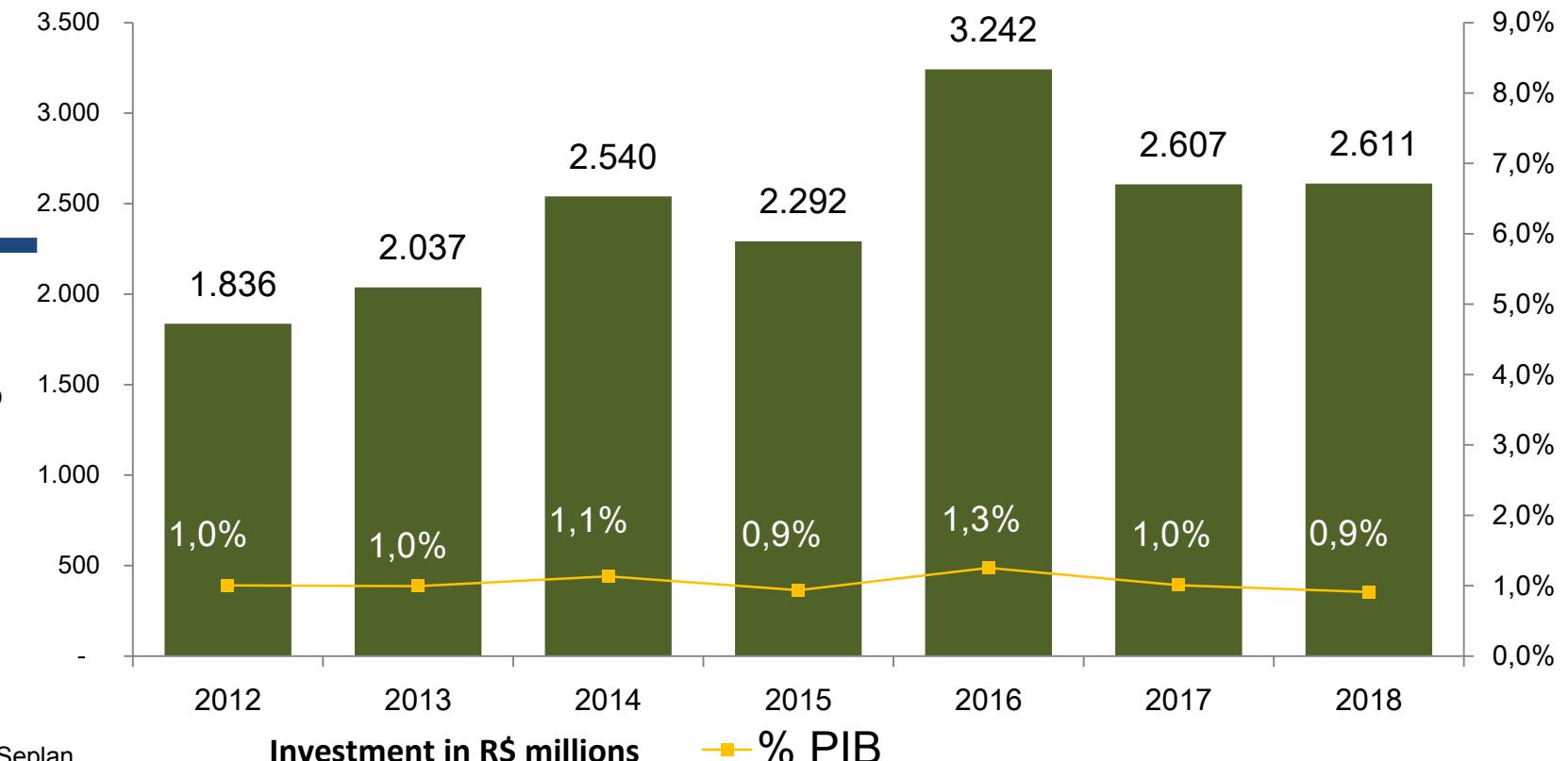
GDP = R\$ 288 (U\$\$ 73) billions

Population = 14,9 million people

GDP per capita = R\$ 19.380 thousands

SEI 2018

**Investment in  
absolute values and  
in percentage of GDP**



# PPP PROJECTS IMPLEMENTED

MORE THAN US \$ 165 MILLION PER YEAR AND MORE  
THAN US \$ 1.65 BILLION IN INVESTMENTS

1 – Hospital of the Suburb

2 – Image Diagnosis

7 - VLT

3 – Hospital for Infectious Diseases

4 – Submarine Outfall

5 – Subway of Salvador

6 - Itaipava Arena Fonte Nova



# PPP (Public Private Partnership) Program of Bahia State

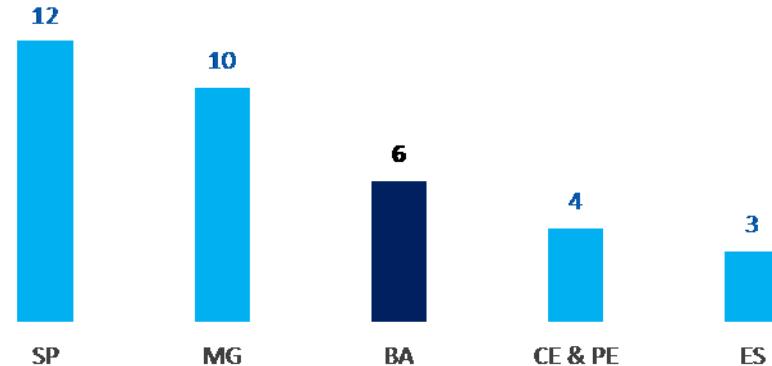
## EXECUTIVE SECRETARY

- Created by Act 9.290/2004, and regulated by Decree Nº 9.321/2005, as a unit linked to Sefaz – State Treasury Secretary
- The Executive Secretary is a technical institution that supports the Managing Council, responsible for the interaction, coordination and negotiation between the private and public institutions.

### 5th State to legislate on PPPs



### 3rd State with greater number of PPPs





## INVESTMENTS 2007 – 2019 (until 4/10/2019) Executed

### BAHIA

978 Projects  
111.203 Jobs  
US\$ 7.3 bi

### GREAT SALVADOR

34% Projects  
29% Jobs  
34% Investments

### INTERIOR

66% Projects  
71% Jobs  
66% Investments



## INVESTMENTS 2020 - 2023 In Deployment

### BAHIA

339 Projects  
32.469 Jobs  
US\$ 6.2 billion

### GREAT SALVADOR

26% Projects  
30% Jobs  
15% Investments

### INTERIOR

78% Projects  
74% Jobs  
89% Investments

# ECONOMIC SECTORS

AGRICULTURE



AUTOMOTIVE



RENEWABLE ENERGY



MINING



PERFUMERY AND COSMETICS



HEALTH



FOOD AND BEVERAGES



FOOTWEAR AND LEATHER



INFRASTRUCTURE



PAPER AND CELLULOSE



PETROLEUM | GAS | CHEMICAL

# BAHIA MAP



AGRONEGÓCIO



## AUTOMOTIVO



## MINERAÇÃO



## CALÇADOS E COURO



## PAPEL E CELULOSE



## PERFUMARIA, COSMÉTICOS E HIGIENE PESSOAL



SAÚDE



## ALIMENTOS E BEBIDAS



## METAL MECÂNICO



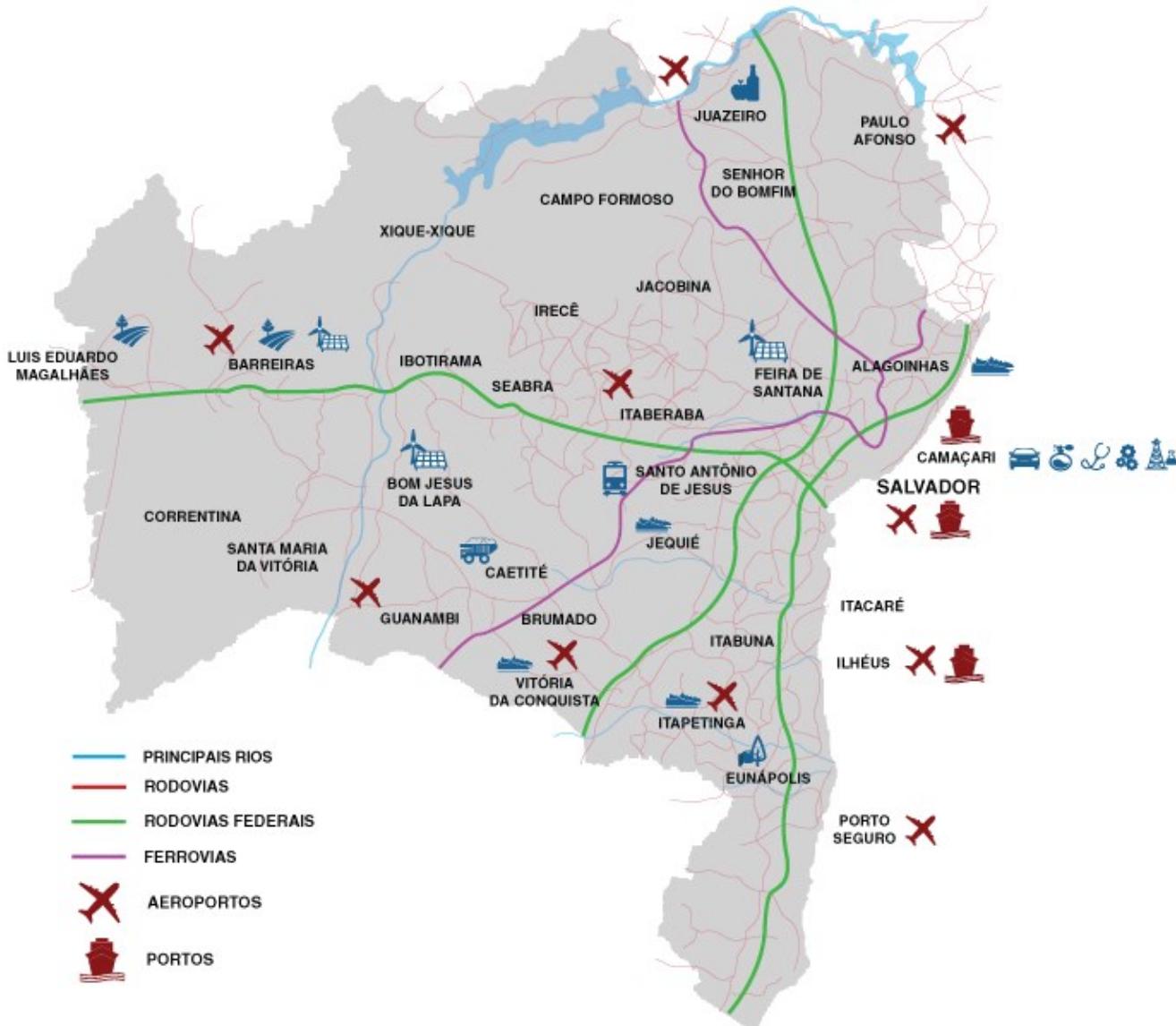
ENERGIAS RENOVÁVEIS



## PETROQUÍMICO, PETRÓLEO E GÁS

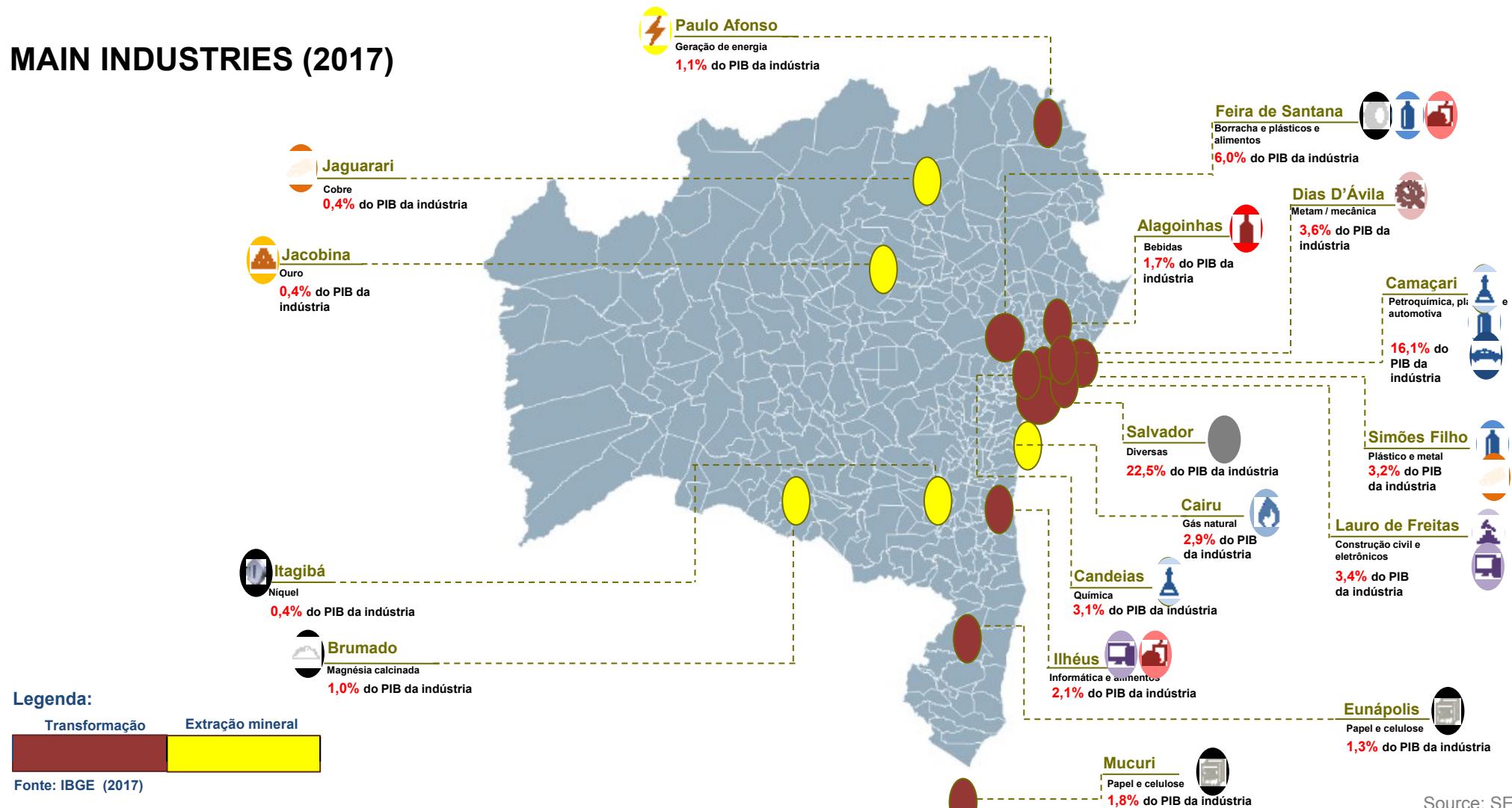


## INFRAESTRUTURA



# OPPORTUNITIES

## MAIN INDUSTRIES (2017)



# OPPORTUNITIES

## INVESTMENTS EXPECTED UNTIL 2023

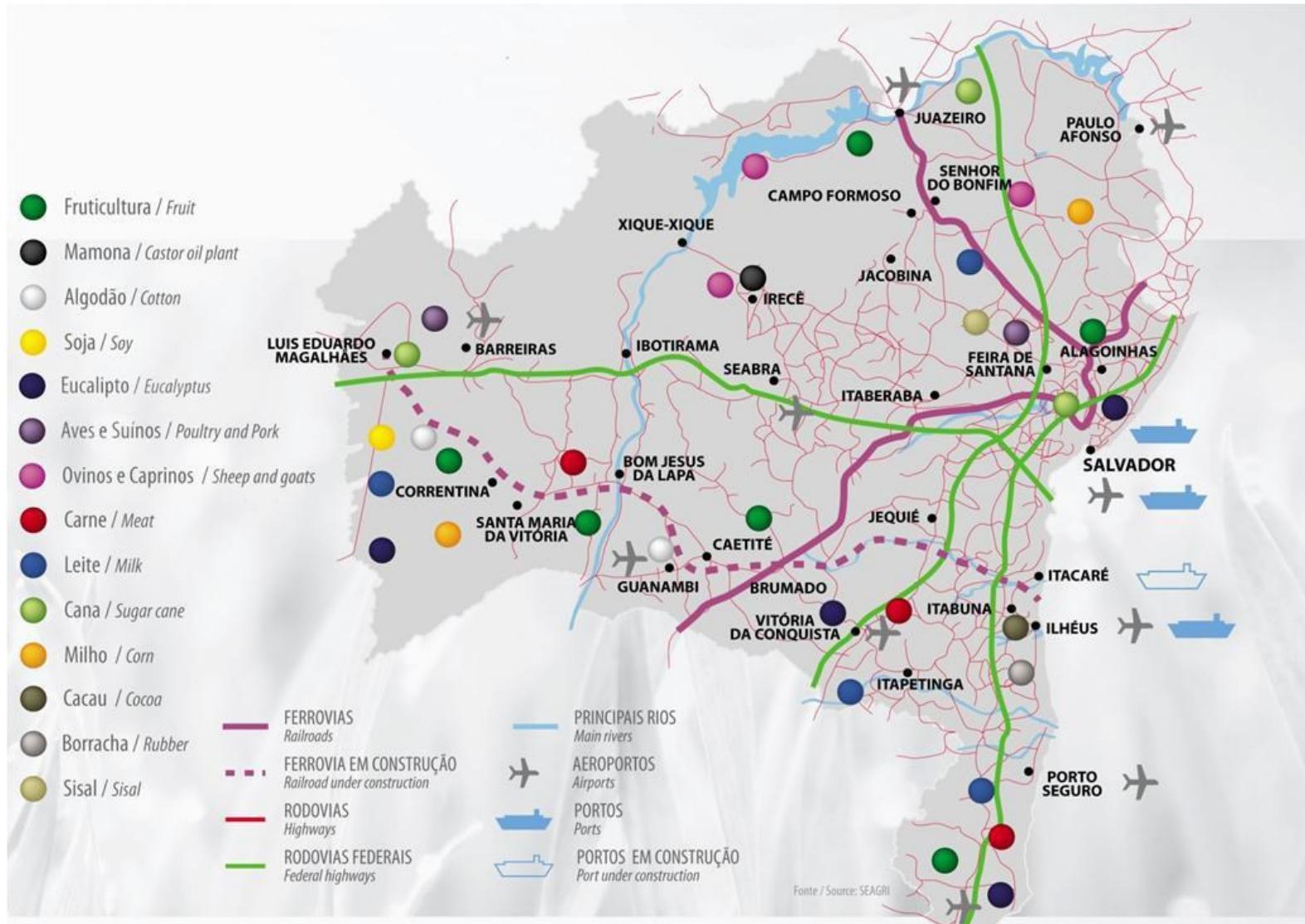
### Segments that use Natural Gas in their production process

SEGMENT	COMPANIES	INVESTMENT (US \$)
PAPER AND CELLULOSE	12	351,630,000
PLASTICS AND RUBBER	31	278,248,788
CHEMICAL AND PETROCHEMICAL	34	206,743,030
FOODS	46	62,878,788
MINING	2	44,433,030
DRINKS	8	28,545,455
PHARMACOLOGICAL AND PHARMACEUTICAL	4	9,242,424
PETROLEUM BYPRODUCTS AND BIOFUEL	3	7,954,545
METALLURGY / STEEL INDUSTRY	3	351,630,000
<b>TOTAL</b>	<b>143</b>	<b>1,454,096,364</b>

Average dolar = R\$ 3.70

Source: BACEN (2019)

# MAP OF AGRIBUSINESS



# AUTOMOTIVE

## VEHICLES

- 4th largest producer of vehicles in the country
- 8% market share in the country
- Houses one of Ford's five design centers worldwide
- Innovative production model, with high levels of automation using state-of-the-art technology.
- High standard of efficiency and quality of its operations



## PRODUCTION CAPACITY

- 250 thousand vehicles per year
- 210 thousand engines per year

Fonte: FORD , 2018

Fonte: ANFAVEA , 2018

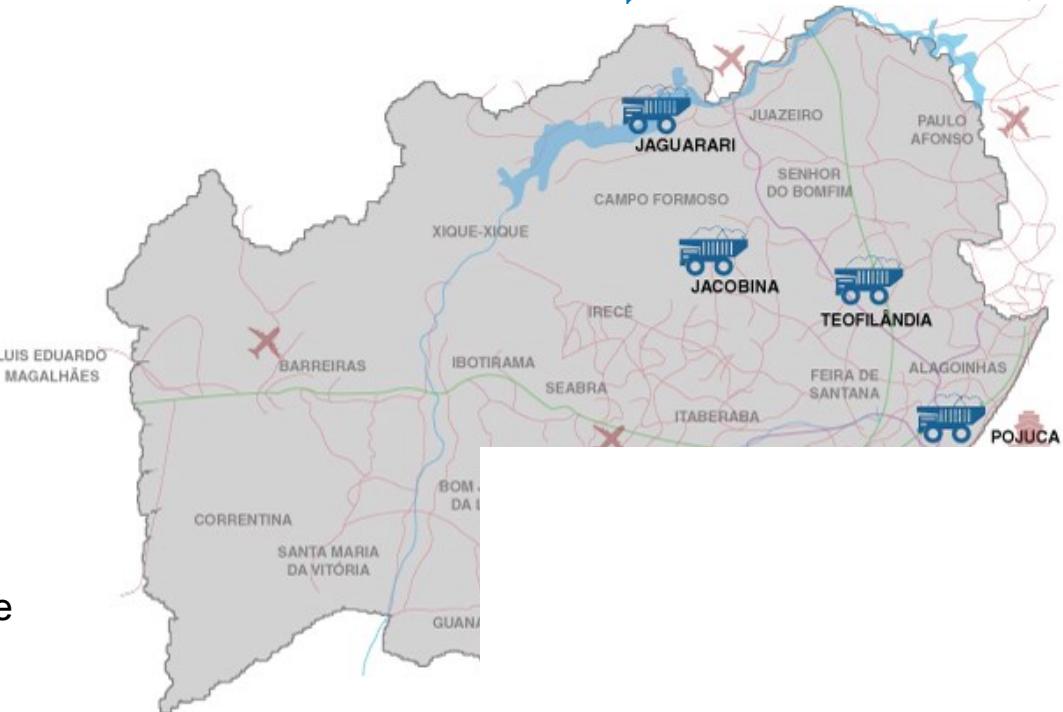


- RODOVIAS / Highways
- RODOVIAS FEDERAIS / Federal highways
- FERROVIAS / Railways
- AEROPORTOS / Airports
- PORTOS / Ports

# MINING

2nd largest producer of bentonite.

- 3rd producer of copper, mineral water, precious stones, silver, with emphasis on the production of gold and ornamental stones.
- Production of more than 30 gemological varieties (emerald, amethyst, rutile, etc.) and unique producer of kimberlite diamonds.
- Only world producer of blue granite (Azul Bahia, Azul Macaúbas and Azul Boquira) and only state to produce the Travertine marble - Bege Bahia.
- Largest reservoir of siliceous sand of high purity in Brazil for the production of glass and optic fiber (reserves estimated at 10 million tons)
- National leader in the production of chromium, uranium, magnesite, talc, salgema and vanadium.
- It houses about 367 mining companies, responsible for about 15 thousand jobs



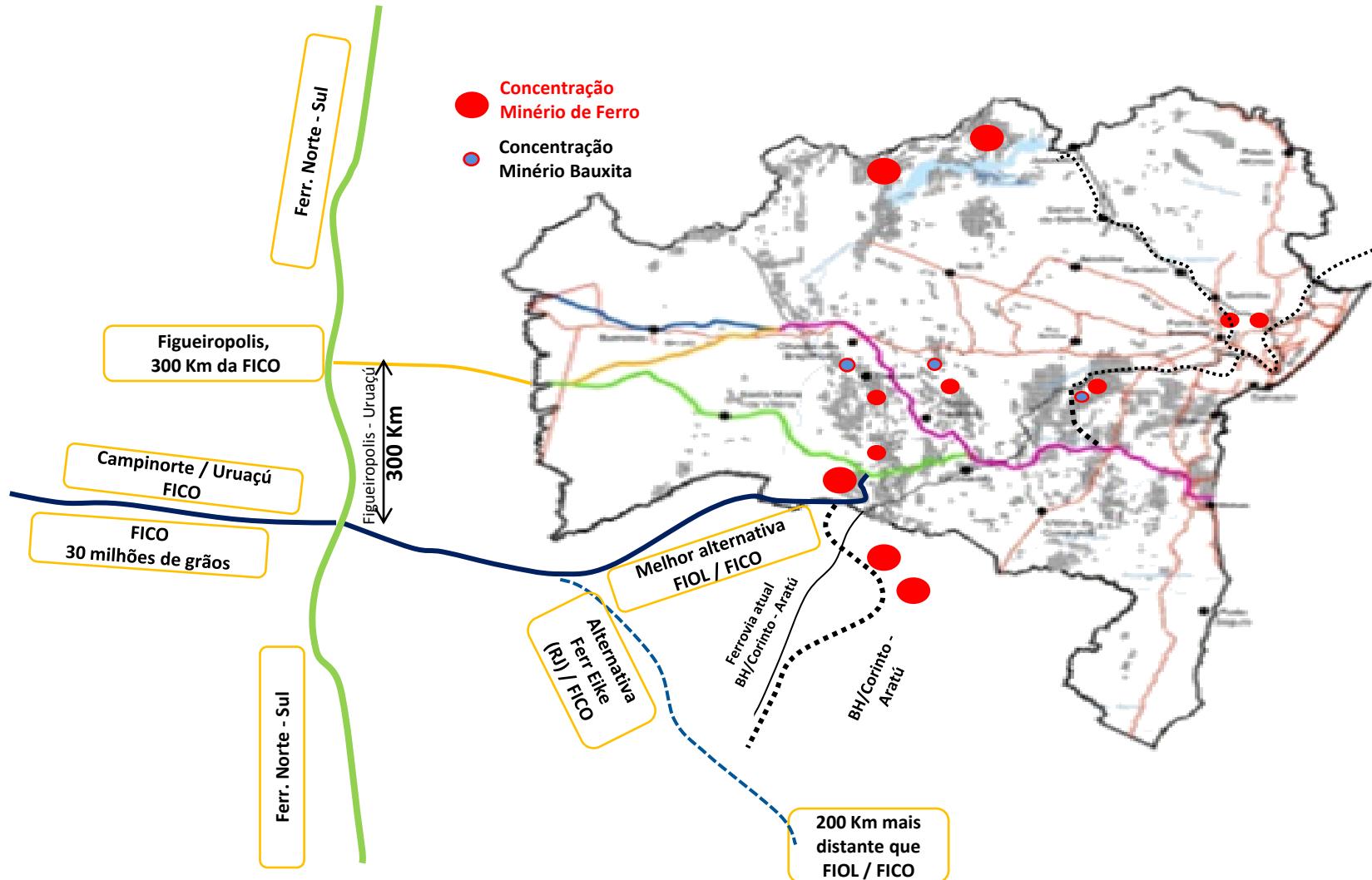
# MINING

## PERS PROJ

- 📍 Ferro
- 📍 Area silicosa de alta puresa
- 📍 Bauxita
- 📍 Gipsita
- 📍 Cimento
- 📍 Cromo e minerais
- 📍 Grafita
- 📍 Areias
- 📍 Barita



# Mining Provinces



# PAPER AND CELLULOSE

## OVERVIEW OF THE SECTOR

National reference in pulp and paper production

- 4th largest eucalyptus producer in Brazil
- Highest world production potential  
Favorable soil and climate conditions

## OPPORTUNITIES IN THE SECTOR

- Attractive opportunity for manufacturers to install paper mills and personal hygiene products.
- Opportunities for factories of machines and equipment.
- Consolidation of the production chain.
- Opportunities for forest poles



**VERACEL**

**SUZANO  
PAPEL E CELULOSE**

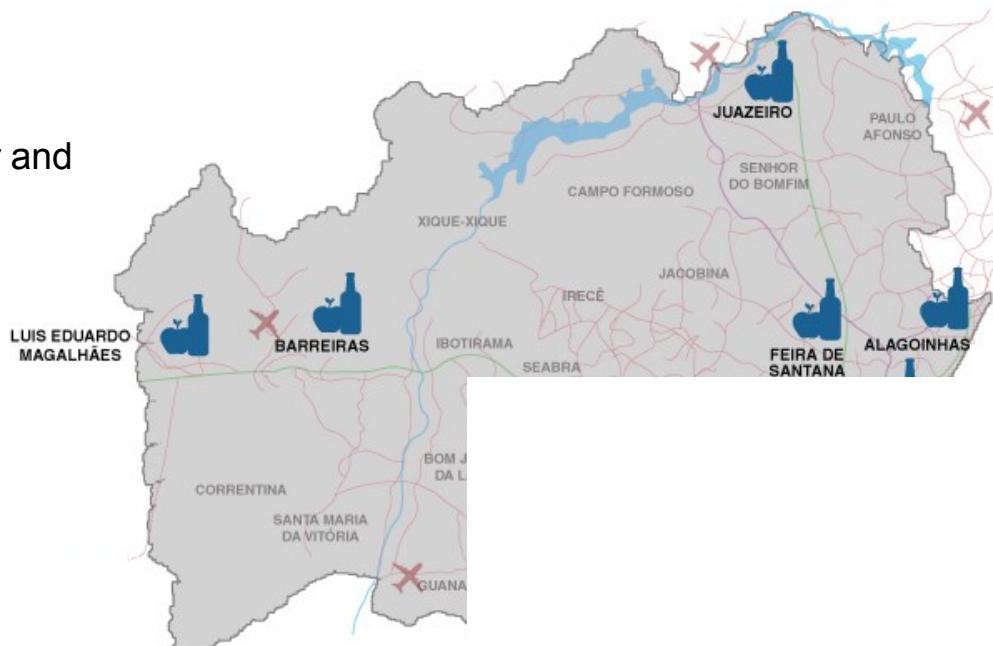
- RODOVIAS / Highways
- RODOVIAS FEDERAIS / Federal highways
- FERROVIAS / Railways
- AEROPORTOS / Airports
- PORTOS / Ports

# FOOD AND BEVERAGES

## OVERVIEW OF THE SECTOR

Production growth (July / 2018) of 5.5% in the food sector and 14% in the beverage sector.

- Highlight in the production of gourmet chocolate.
- Production of quality coffee and 3rd largest domestic producer.
  - 2nd Largest milk production in the Northeast.
  - Excellent water quality, considered one of the best in the world.
  - Highlight in the production of wines with high productivity and quality of the grapes.
  - Manufacture of quality Cachaça



## INVESTMENT OPPORTUNITIES

Market expansion potential for wines, sparkling wine, artisanal beers and cachaças.

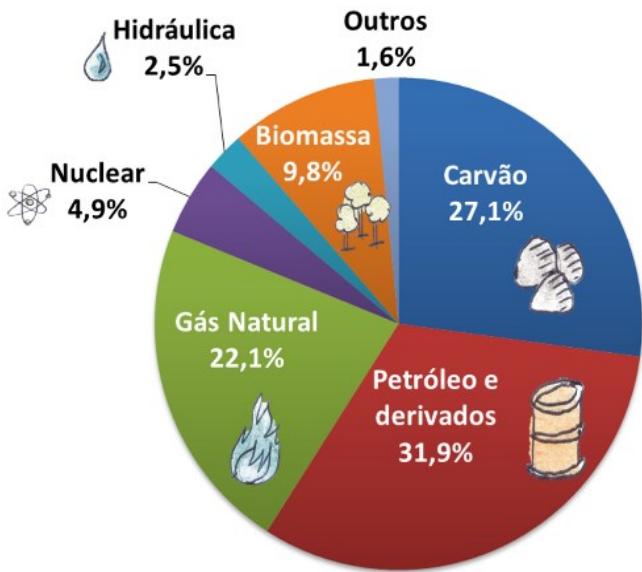
- Installation of industries of packages for water;
- Production of organic and dietetic foods, specialty coffees and gourmet chocolates.



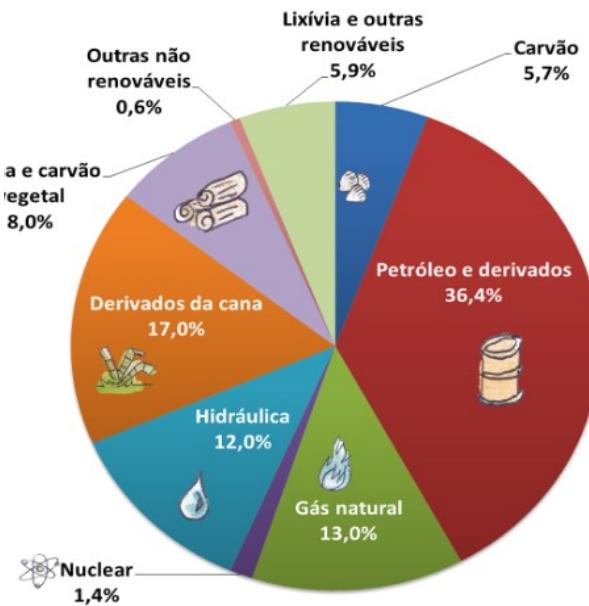
— RODOVIAS / Highways  
— RODOVIAS FEDERAIS / Federal highways  
— FERROVIAS / Railways  
X AEROPORTOS / Airports  
P PORTOS / Ports

# Power Matrix

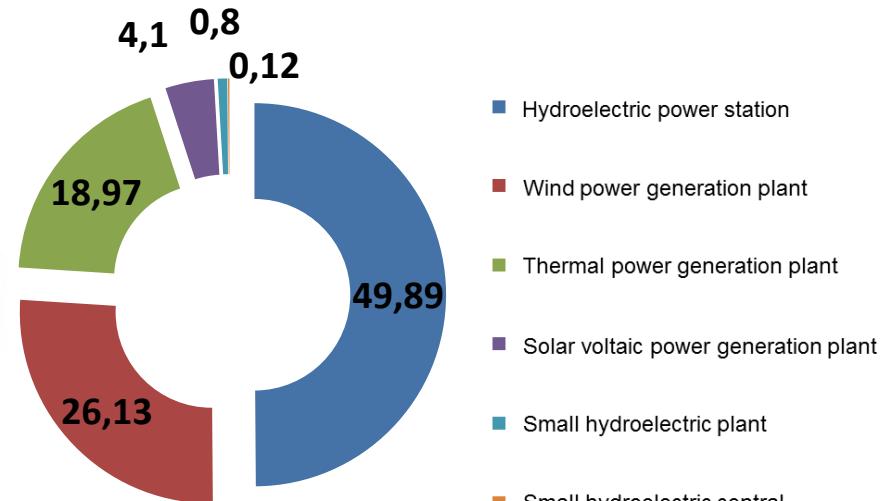
## World



## Brazil



## Bahia



Matriz Energética Mundial 2016 (IEA, 2018)

Matriz Energética Brasileira 2017 (BEN, 2018)

- The Northeastern region has the greatest eolic and photovoltaic solar potentials of Brazil and also presents a big potential for using biomass;
- Big eolic and photovoltaic solar potentials in needy regions, give way to important social and environmental projects

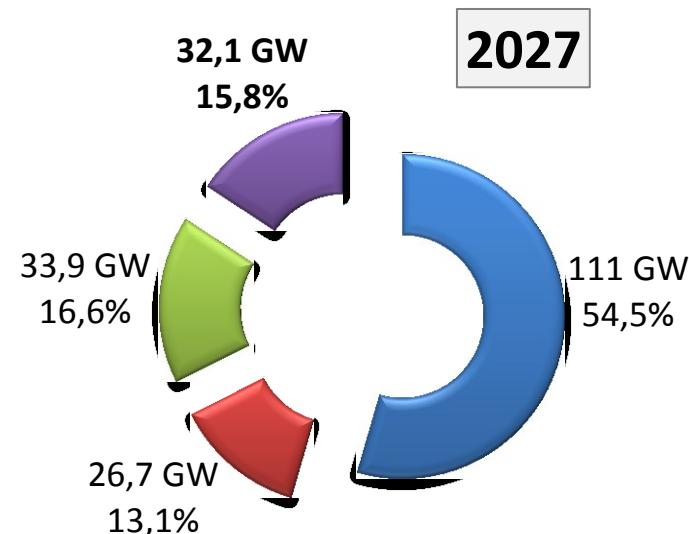
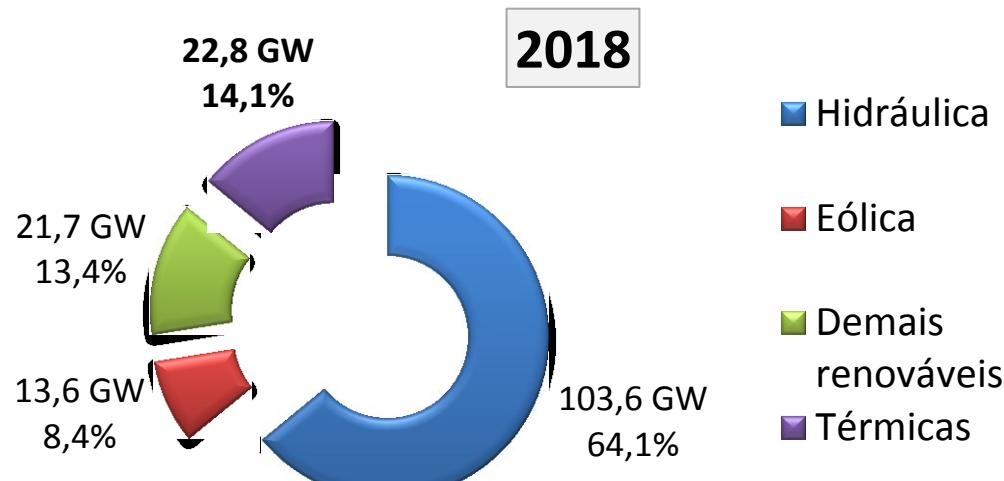
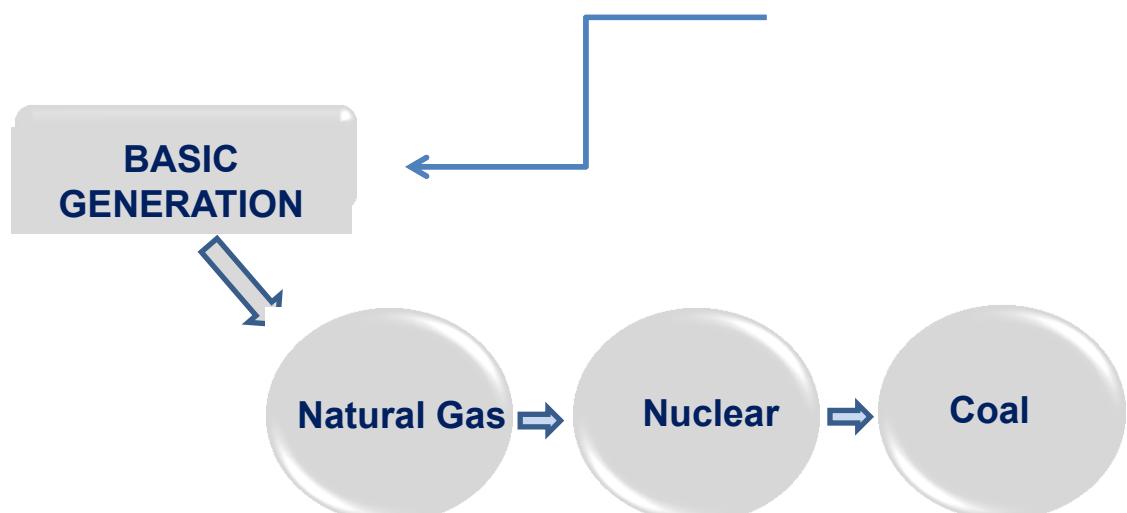
# OPPORTUNITIES

## THERMAL TREND

THERMAL TREND LOWER

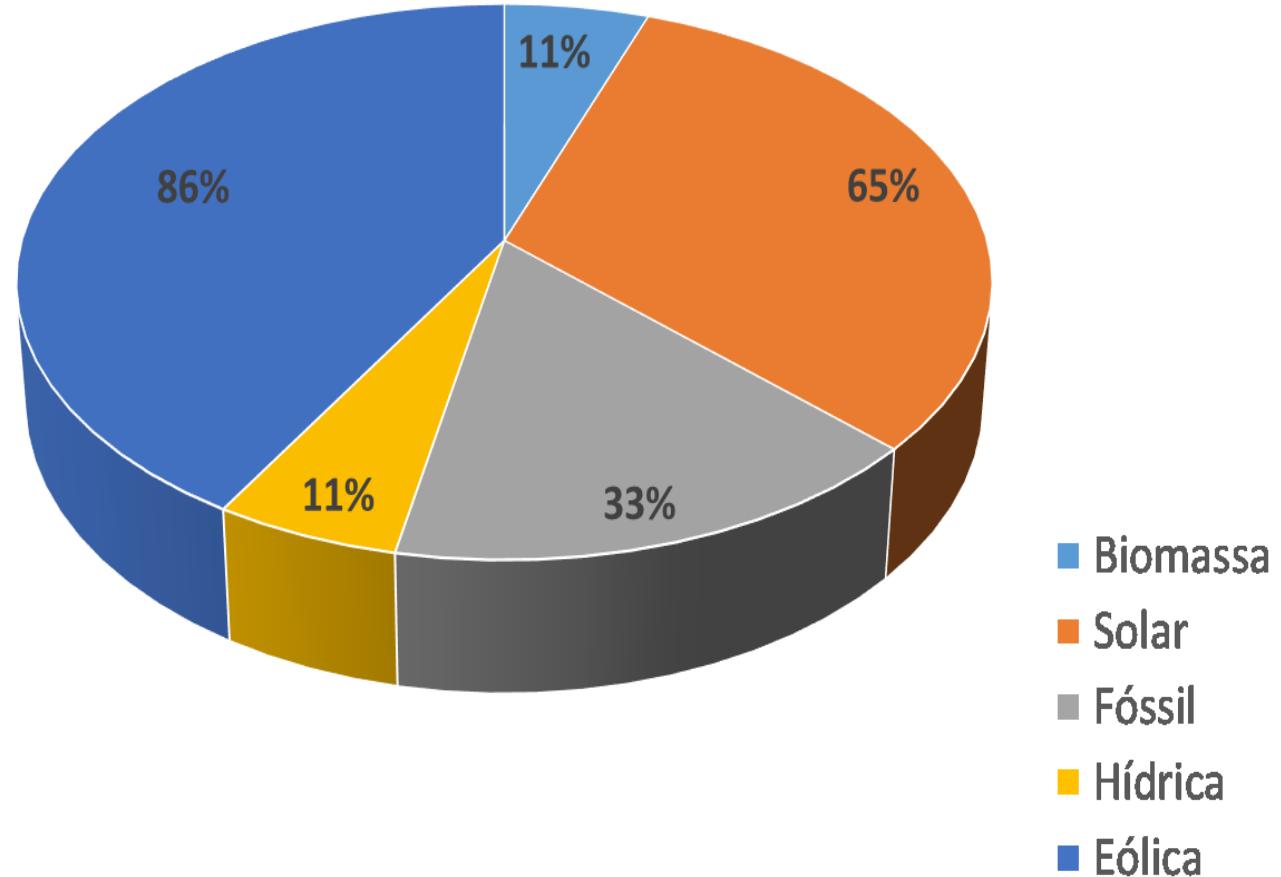
## HYDROELECTRIC EXPANSION WILL MEAN:

- Greater expansion of renewables;
- Increased thermoelectric expansion
- The need for additional power and security of supply



# Northeastern Region Share of the Domestic Installed Capacity (ANEEL, 2019)

- The Northeastern region is an important contributor to the diversification of the Brazilian Power Matrix and one of the cleanest of the world;
- Brazilian northeast has the potential to be one of the biggest world producers of clean power



# RENEWABLE ENERGIES

## OVERVIEW

### WIND ENERGY

#### GENERATION POTENTIAL

- 100M - 70,000 MW
- 150M - 195,000 MW
- 1.5x the Brazilian electrical matrix
- Best Winds: constant, unidirectional and without gusts.
- Wind farms with capacity factor of more than 50%

### PHOTOVOLTAIC SOLAR ENERGY

#### GENERATION POTENTIAL

Broad areas in semi-arid regions for plant installation

- Annual radiation: 1,800kWh / m<sup>2</sup>
- Centralized generation: 218GW
- Annual radiation: 2,000kWh / m<sup>2</sup>
- Centralized generation: 185GW
- Annual upper radiation: 2,200kWh / m<sup>2</sup>
- Centralized generation: 100GW

#### DISTRIBUTED GENERATION

- 1% of the state's total electricity consumption in the year 2016 Estimated annual production of 262 GWh

#### RAW MATERIAL AVAILABILITY

- Production of extra-clear glass (silica mine of high purity)
- Wafer production (quartz with low boron content)

# BEN 2019 | Repartição da oferta interna de energia - OIE

RENOVÁVEIS ▶ 45,3%



Biomassa da  
Cana  
17,4%



Hidráulica<sup>1</sup>  
12,6%



Lenha e  
Carvão Vegetal  
8,4%



Lixívia e outras  
renováveis  
6,9%

NÃO RENOVÁVEIS ▶ 54,7%



Petróleo e  
derivados  
34,4%



Gás  
Natural  
12,5%



Carvão  
Mineral  
5,8%



Urânio  
1,4%



outras não  
renováveis  
0,6%

<sup>1</sup> Inclui importação de eletricidade oriunda de fonte hidráulica

# WIND / SOLAR ENERGY



# WIND ENERGY

## PROVIDERS

- NACELE and HUB | GE-Alstom, Gamesa, Nordex-Acci
- TOWERS | Torrebras, Wobben, Northeast Wind Towers

## REGULATED MARKET

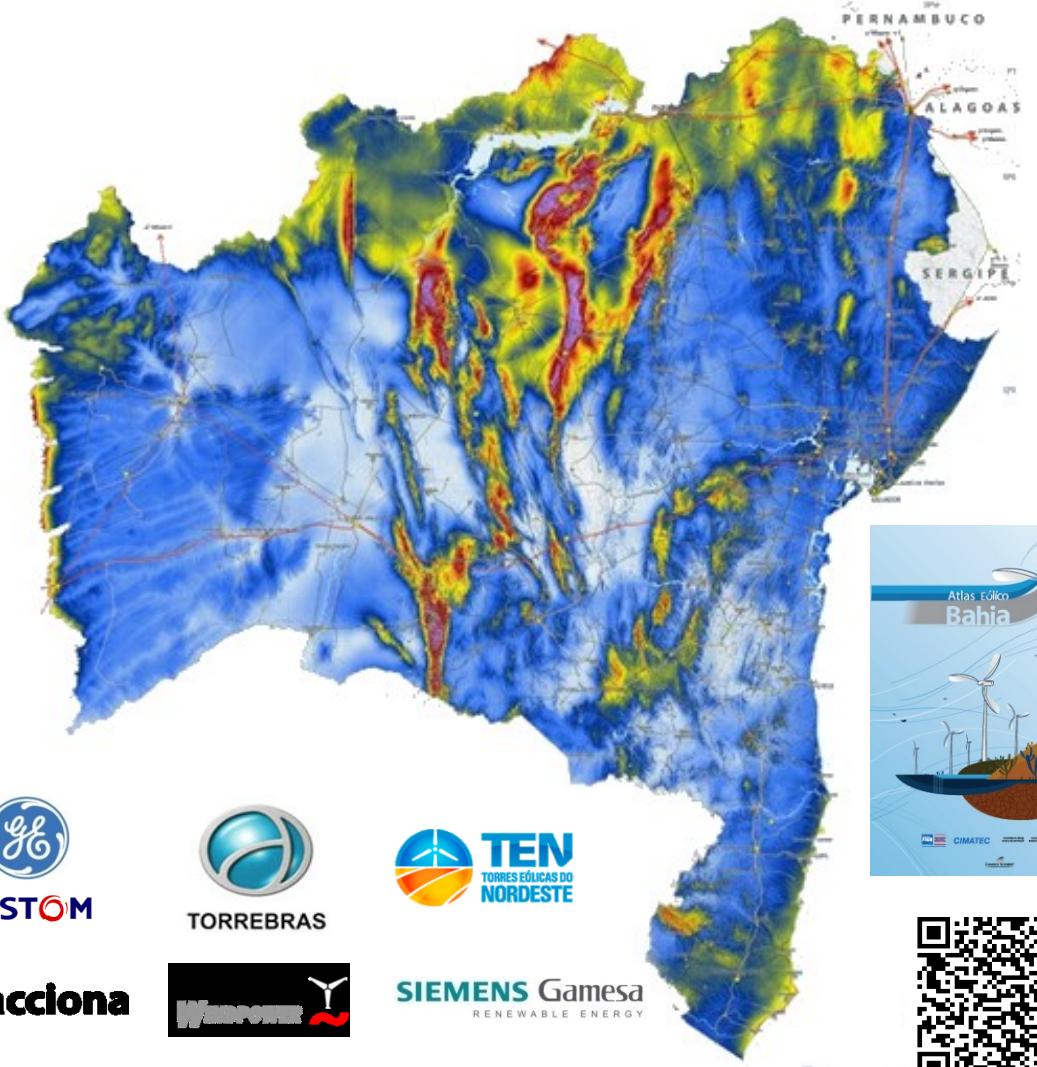
- 191 projects | 4,578 MW
- 127 projects in operation | 3,332 MW
- 37 projects under construction | 618 MW
- 27 projects with uninitiated construction | 628 MW

## FREE MARKET

- 52 projects | 940 MW
- 15 projects in operation | 303 MW
- 15 projects under construction | 237 MW
- 22 projects with uninitiated construction | 400 MW

## FREE + REGULATED MARKET

- 243 projects | 5,518 MW
- 142 projects in operation | 3,635 MW
- 52 projects under construction | 855 MW
- 49 projects with uninitiated construction | 1.028 MW

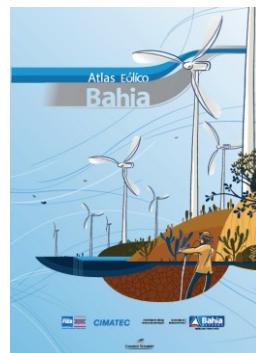


ALSTOM



TORREBRAS


 TEN  
TORRES EÓLICAS DO  
NORDESTE

 SIEMENS Gamesa  
RENEWABLE ENERGY


Source: ANEEL (2019)

# RENEWABLE ENERGY

# WIND AND SOLAR ENERGY PHOTOVOLTAIC

## Areas of intersection in the central region of Bahia Ex.: Caetité, Guanambi, Xique-Xique and Sento Sé

## HYBRID PARKS

## HYBRID GENERATION POTENTIAL

## Wind - Winds greater than 7.0 m / s at 100m in height

Estimated Capacity 70 GW

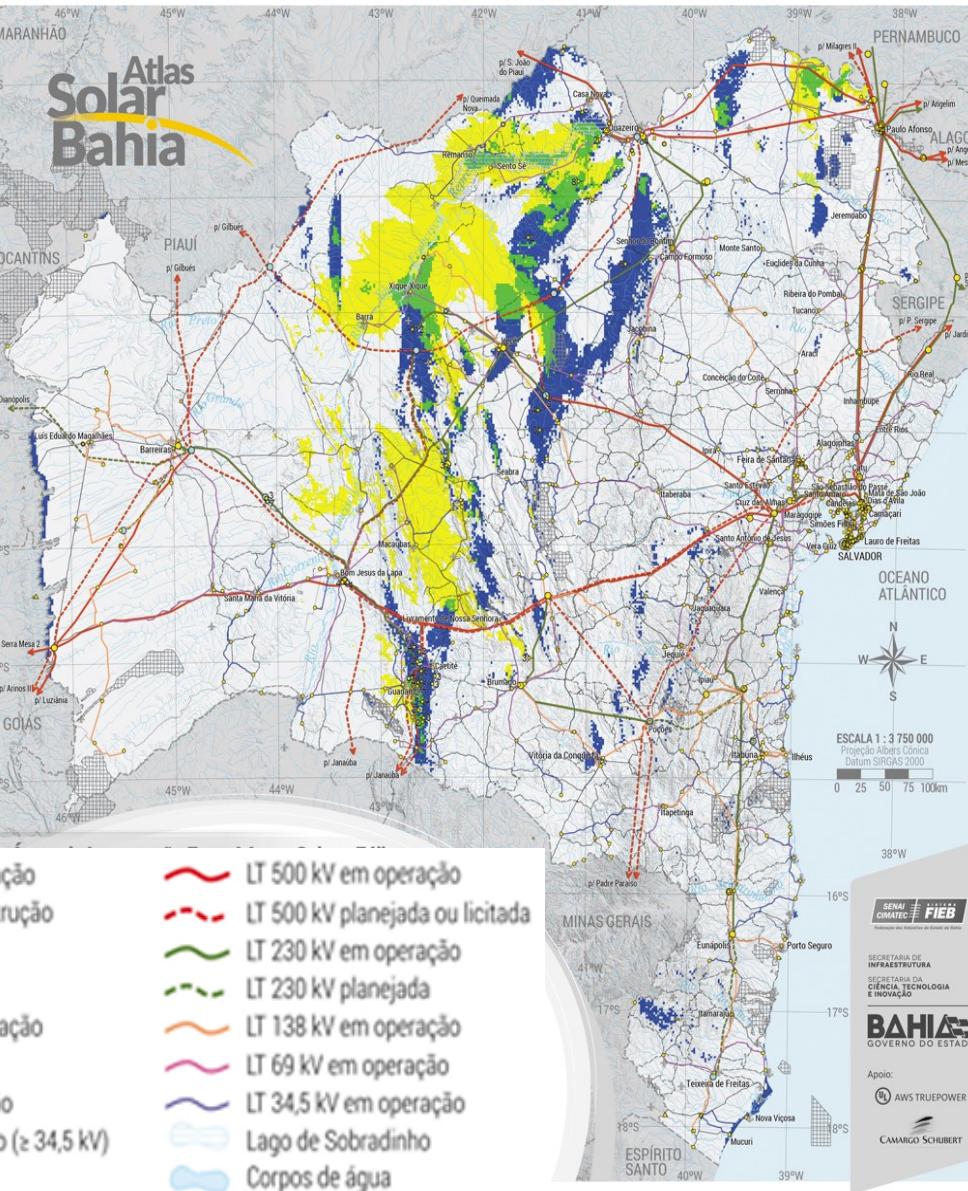
Solar - Annual Irradiation Level 2,200 kWh / m<sup>2</sup>

Estimated Capacity 100 GW

Estimated Total Capacity of 170 GW



- ▶ Conj. de n usinas fotovoltaicas em operação
- ▶ Conj. de n usinas fotovoltaicas em construção
- ~ Conj. de n usinas eólicas em operação
- ▲ Usinas hidrelétricas em operação
- ▲ Pequenas centrais hidrelétricas em operação
- Usinas térmicas em operação
- Subestações em operação – transmissão
- Subestações em operação – distribuição ( $\geq 34,5$  kV)
- Subestação planejadas – transmissão



# SOLAR ENERGY

## PANORAMA OF PROJECTS

- 31 projects | 759.3 MW
- 26 projects in operation | 634.7 MW
- 1 project under construction | 30 MW
- 4 projects with uninitiated construction | 94.6 MW

## PHOTOVOLTAIC RESIDENTIAL TECHNICAL POTENTIAL

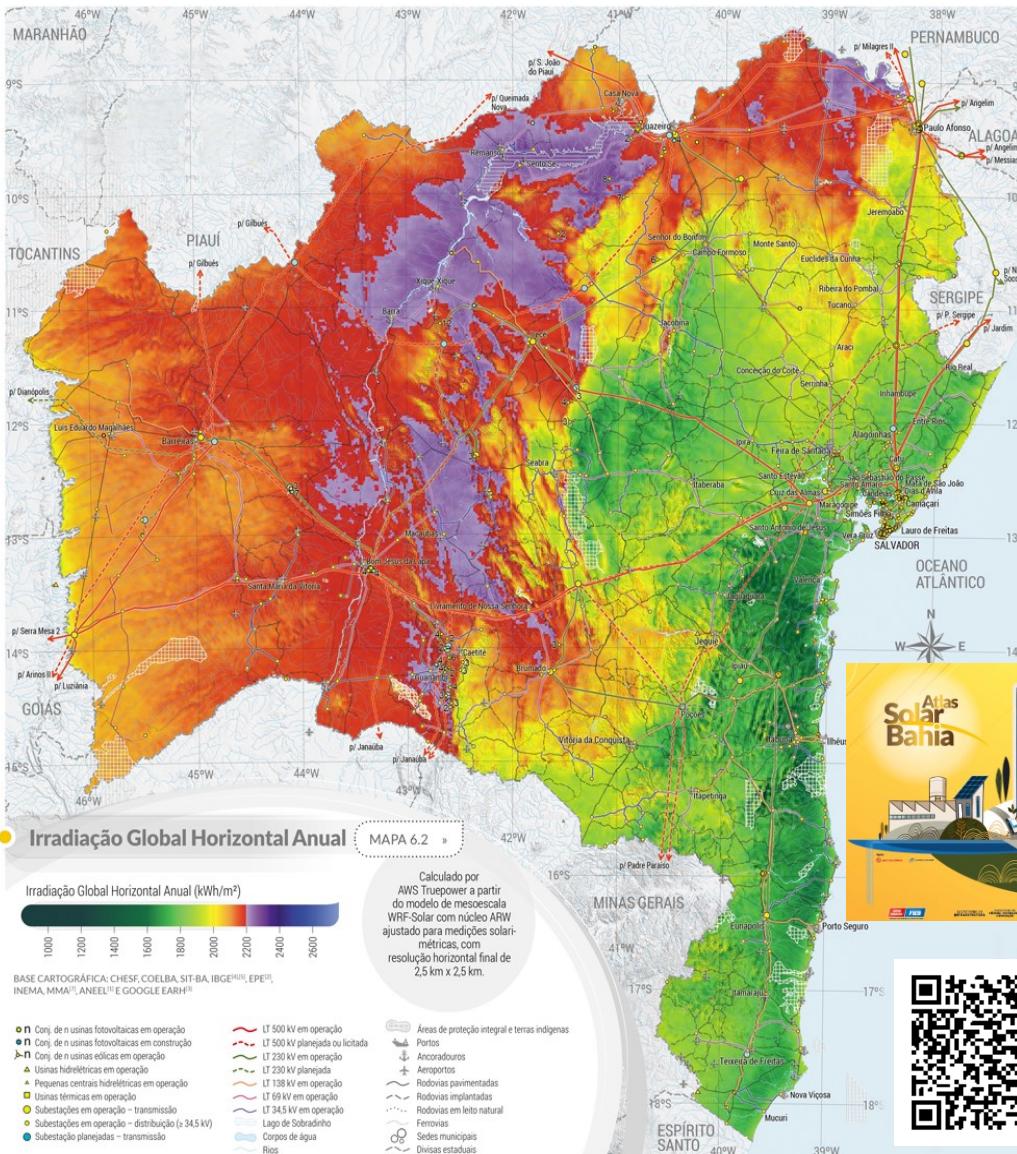
Potencial Fotovoltaico Residencial (MW médios)	2.360
Potencial Fotovoltaico Residencial (GWh/ano)	20.674
Consumo Residencial Anual 2013 (Gwh)	6.144
Potencial Fotovoltaico/ Consumo Residencial	337%

## GENERATING PARKS

- Bom Jesus da Lapa
- Tabocas do Brejo Velho
- Juazeiro



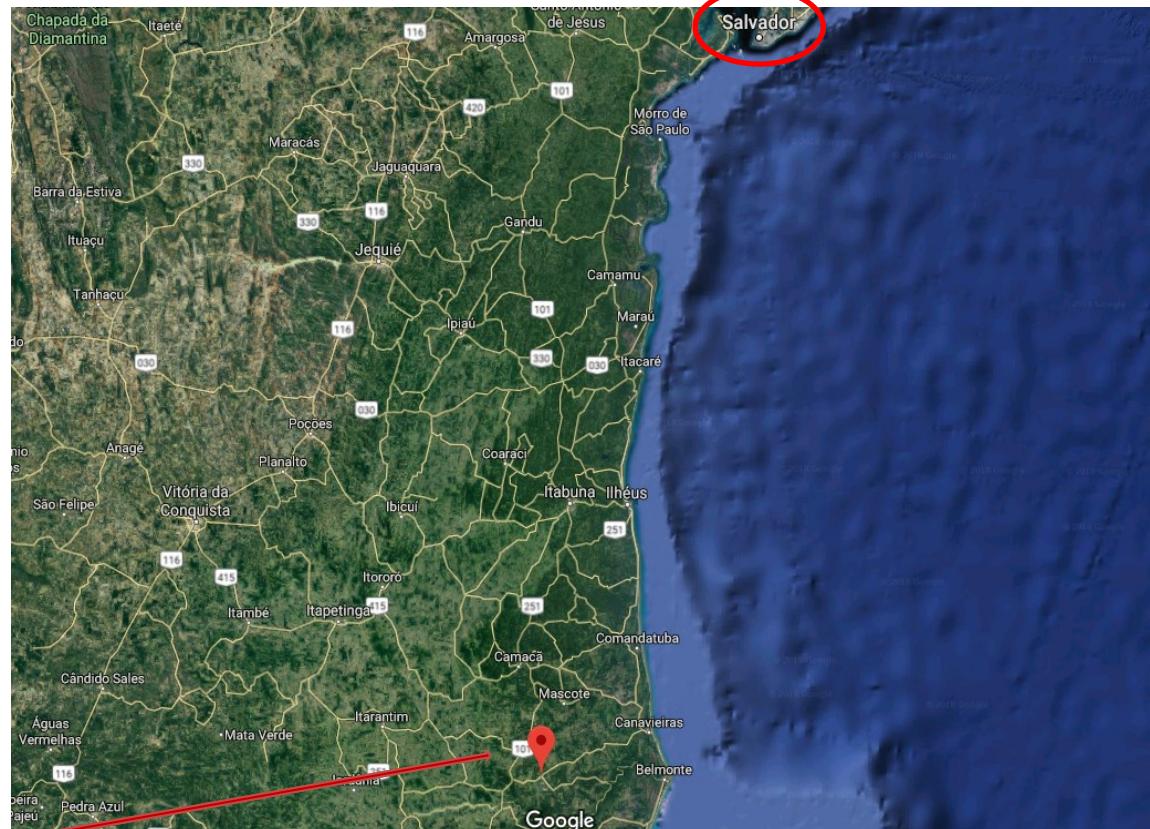
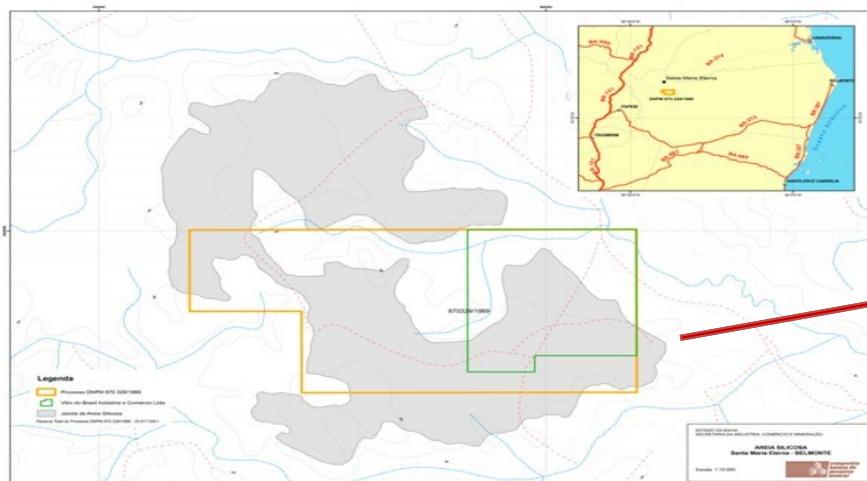
Source: ANEEL (2019)



# SOLAR ENERGY

## SILICA ORE OF SANTA MARIA ETERNA (MUNICIPALITY OF BELMONTE)

- Inorganic average chemical composition of SiO<sub>2</sub> equal to 99.74% with low content of contaminants and metals.
- Part of the Mining Rights leased by Companhia Baiana de Mineração (CBPM) to Vitro do Brasil SA and Portsmouth (Mineração Jundu).
- Extra clear glass patterns.



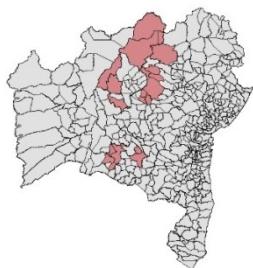
### DISTANCES:

- Salvador - 594 km
- Camaçari - 578 km
- Port of Aratu - 569 km

# Overview of Centralized Projects

## Eolic

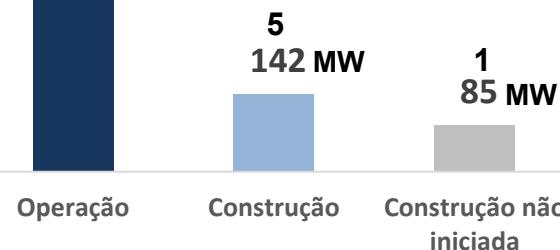
**157**  
**3.935 MW**



**R\$ 15,5 bilhões já investidos**  
**R\$ 5,7 bilhões a serem investidos**  
**19 municípios beneficiados com projetos em operação**

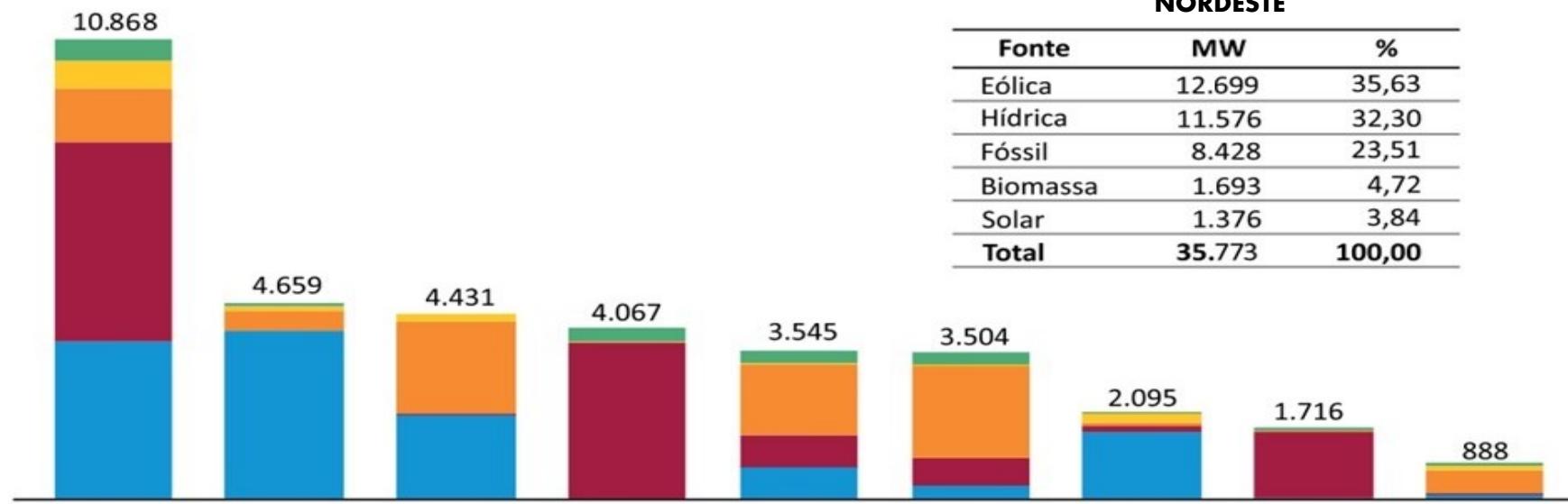
## Solar

**24**  
**652 MW**



**R\$ 3,2 bilhões já investidos**  
**R\$ 737 milhões a serem investidos**  
**5 municípios beneficiados com projetos em operação**

## Northeastern States : installed capacity \* of power generation by source (MW) 2019



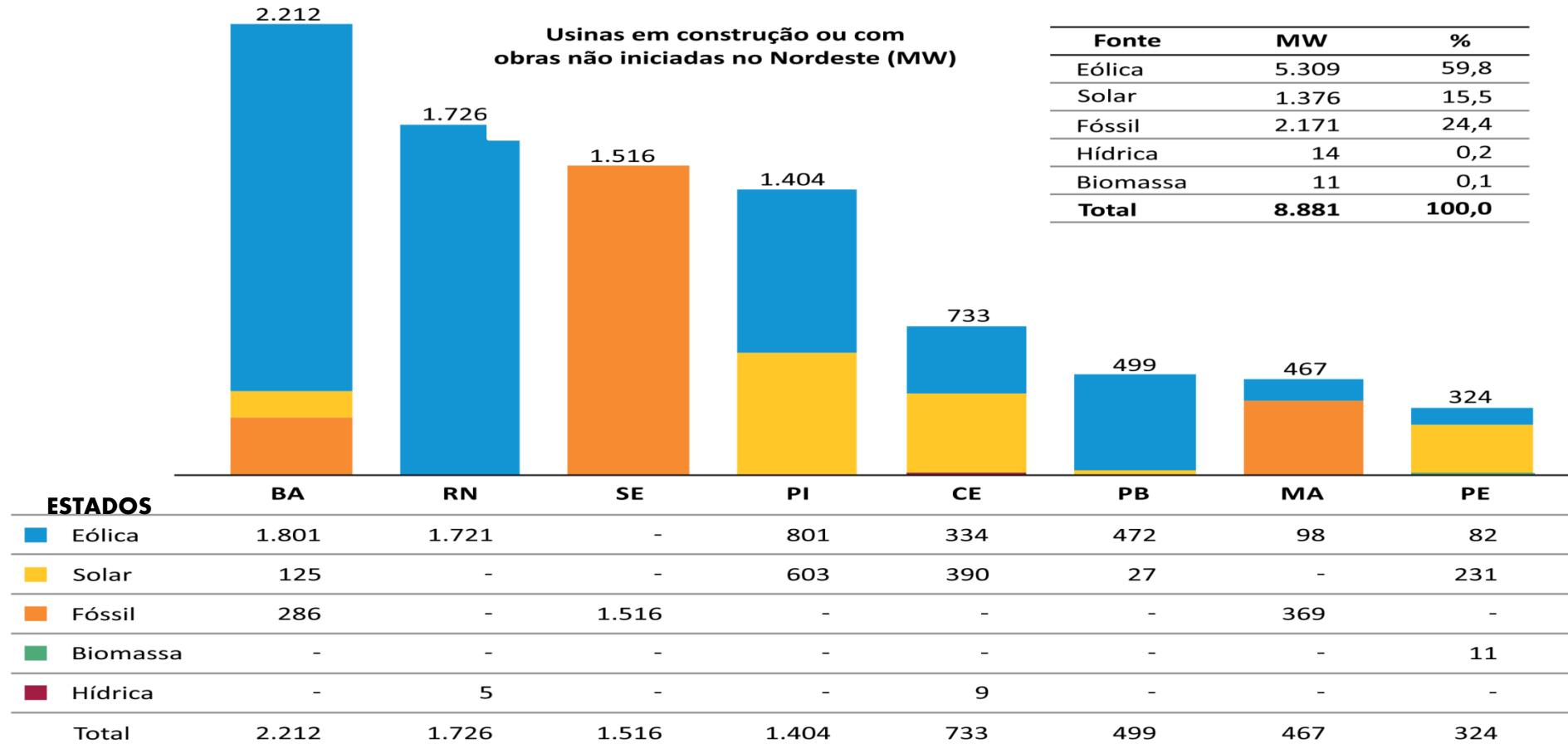
NORDESTE		
Fonte	MW	%
Eólica	12.699	35,63
Hídrica	11.576	32,30
Fóssil	8.428	23,51
Biomassa	1.693	4,72
Solar	1.376	3,84
<b>Total</b>	<b>35.773</b>	<b>100,00</b>

Fonte: ANEEL (2019a).

Elaboração: BNB/ETENE/Célula de Estudos e Pesquisas Setoriais.

Notas: \* corresponde à potência fiscalizada das usinas pela ANEEL. Na geração solar, não está inclusa a geração distribuída, apenas a centralizada.

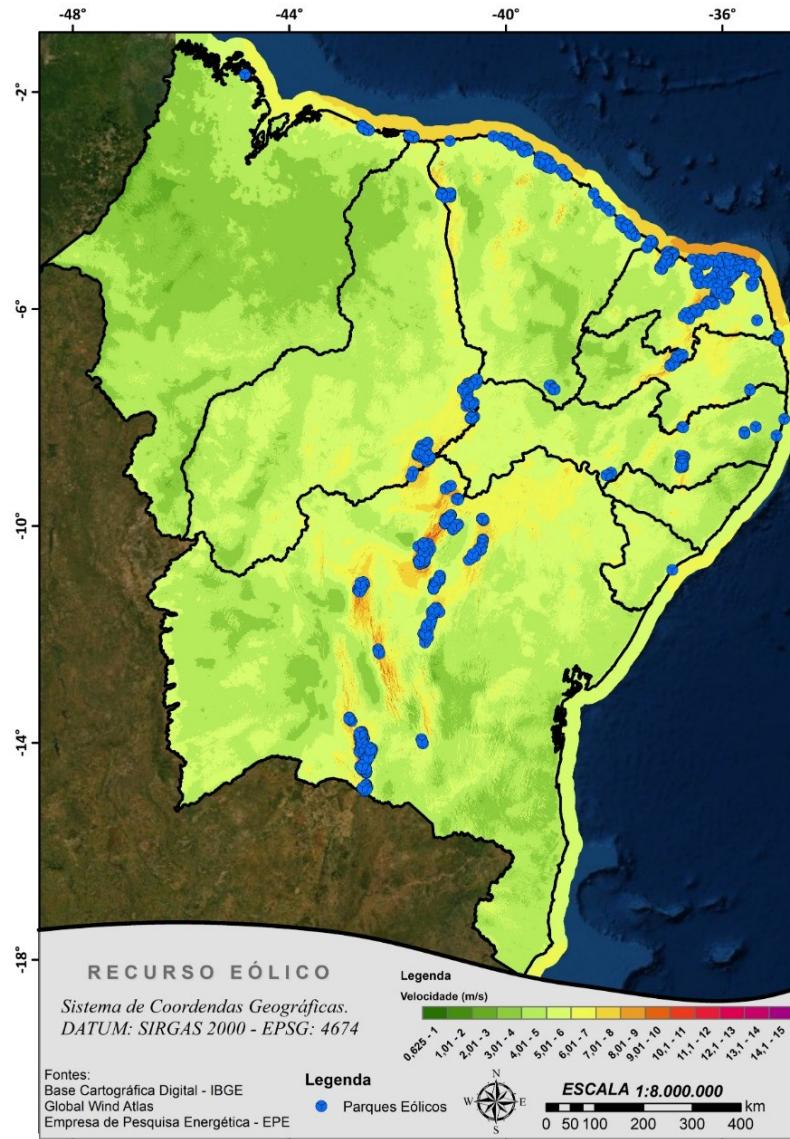
# Plants under construction or under project, by source and by Northeastern states 2019



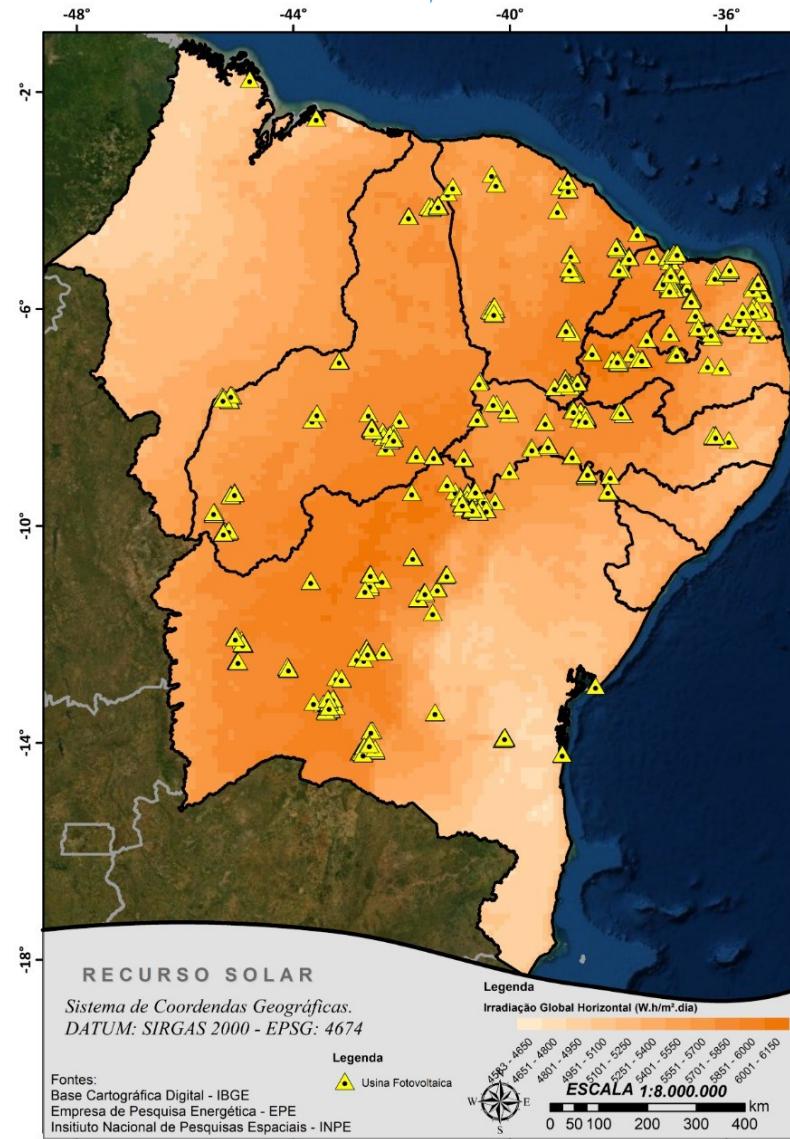
Fonte: ANEEL (2019a). Elaboração: BNB/ETENE/Célula de Estudos e Pesquisas Setoriais.

Nota: parcela hídrica refere-se a PCH.

# EOLIC PARKS



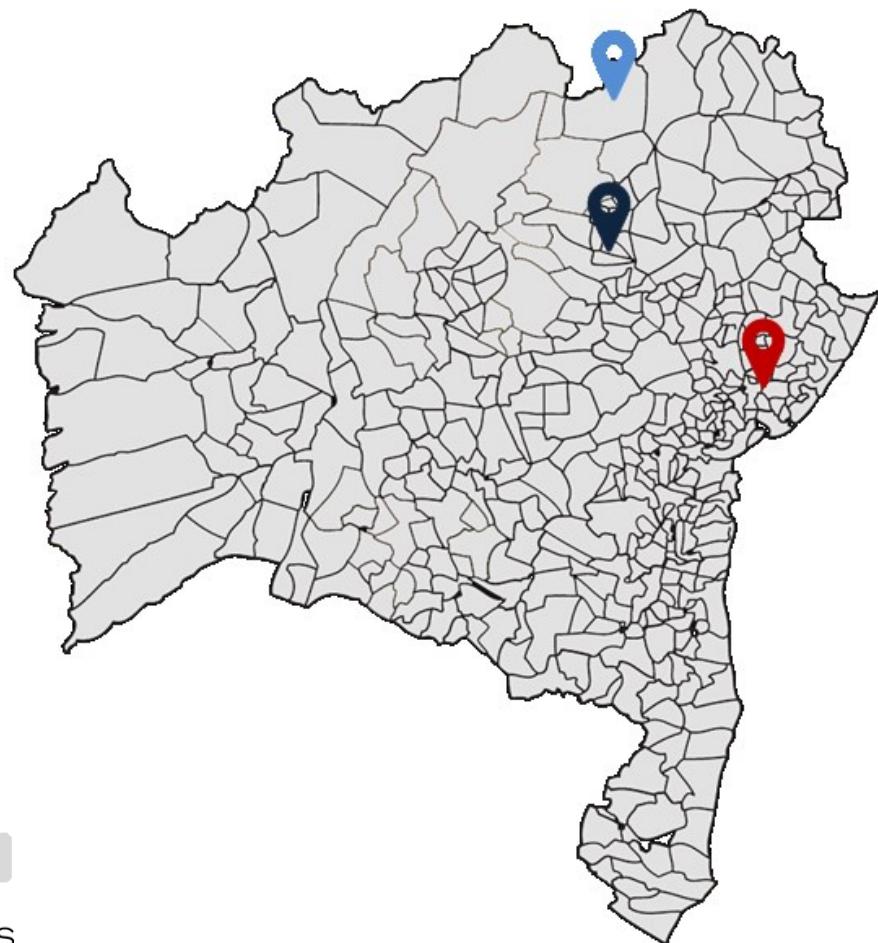
# SOLAR PARKS



# Eolic Devices' Manufacturing Industry

Empresa	Produto	Investimento (R\$)	Emprego
GE/Alstom	Aero gerador	128 Mi	144
Siemens/ Gamesa	Aero gerador	400 Mi	192
Nordex/ Acciona	Aero gerador	45 Mi	55
Torrebras	Torre Aço	70 Mi	360
Wobben	Torre Concreto	25 Mi	200
Torres Eólicas do Nordeste	Torre Aço	86 Mi	461
Tecsis*	Pás	120 Mi	877

\*Em hibernação




**Juazeiro**




**Jacobina**




**Simões Filho**




**Camaçari**

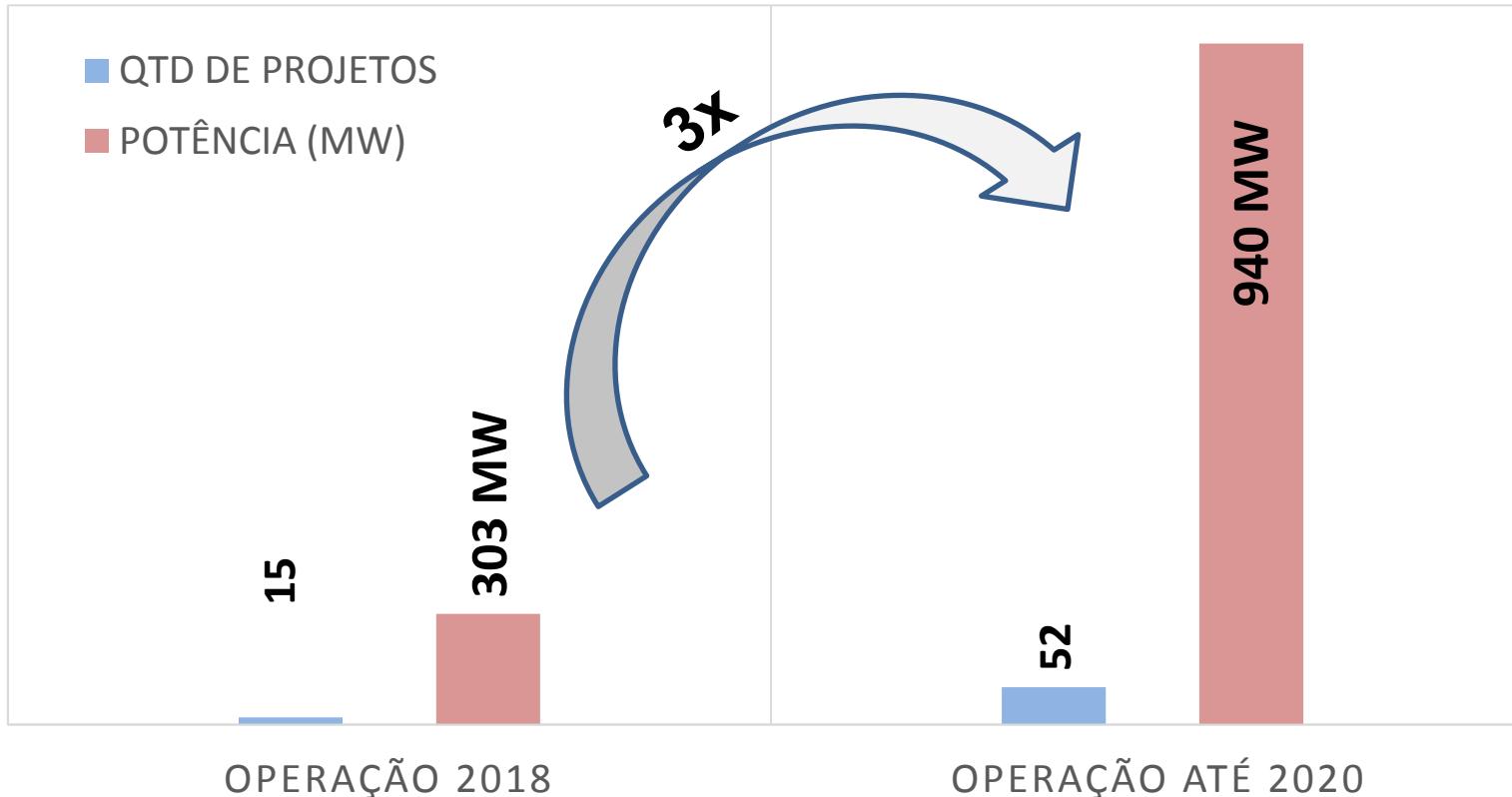


Fonte: SDE. (agosto 2019)

# WIND ENERGY

## FREE MARKET WIND

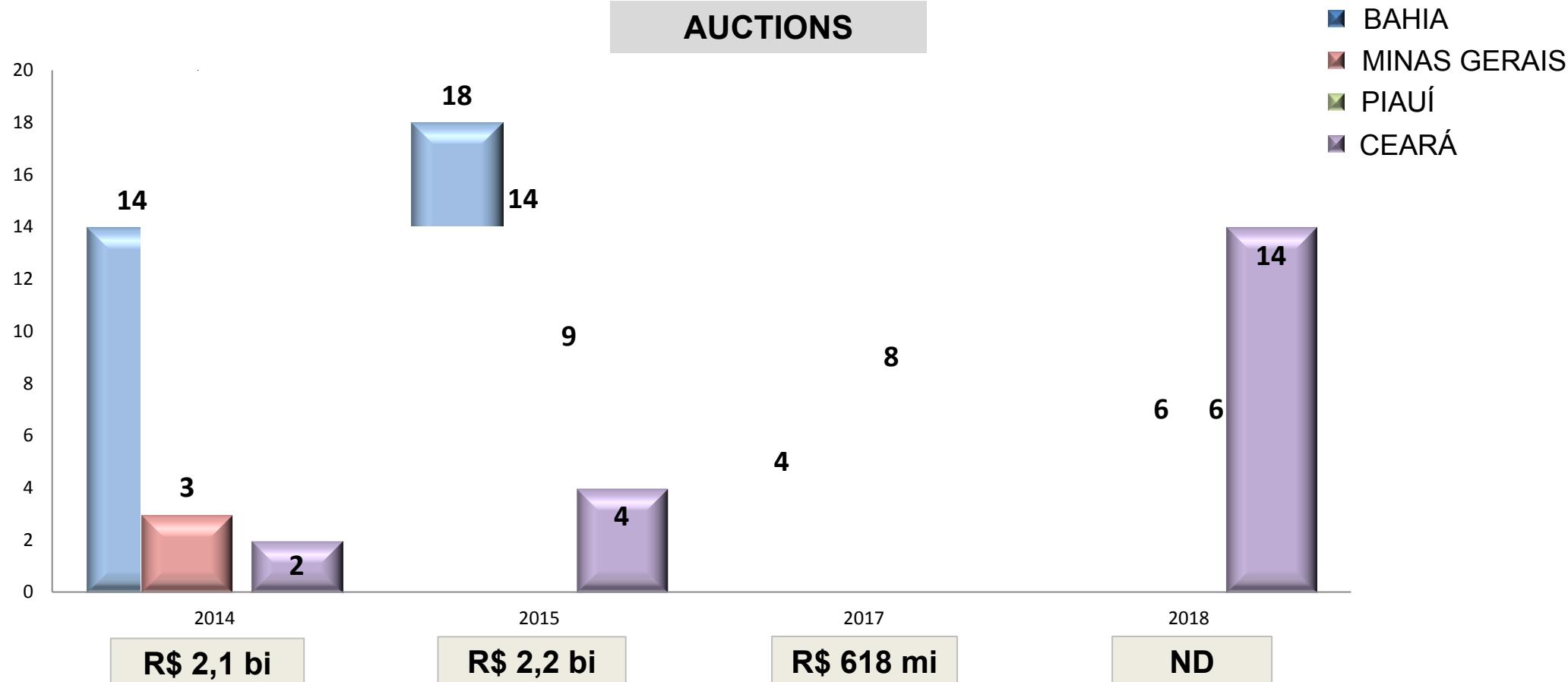
### ENERGY GROWTH



# SOLAR ENERGY

## REGULATED MARKET

### Comparison between States

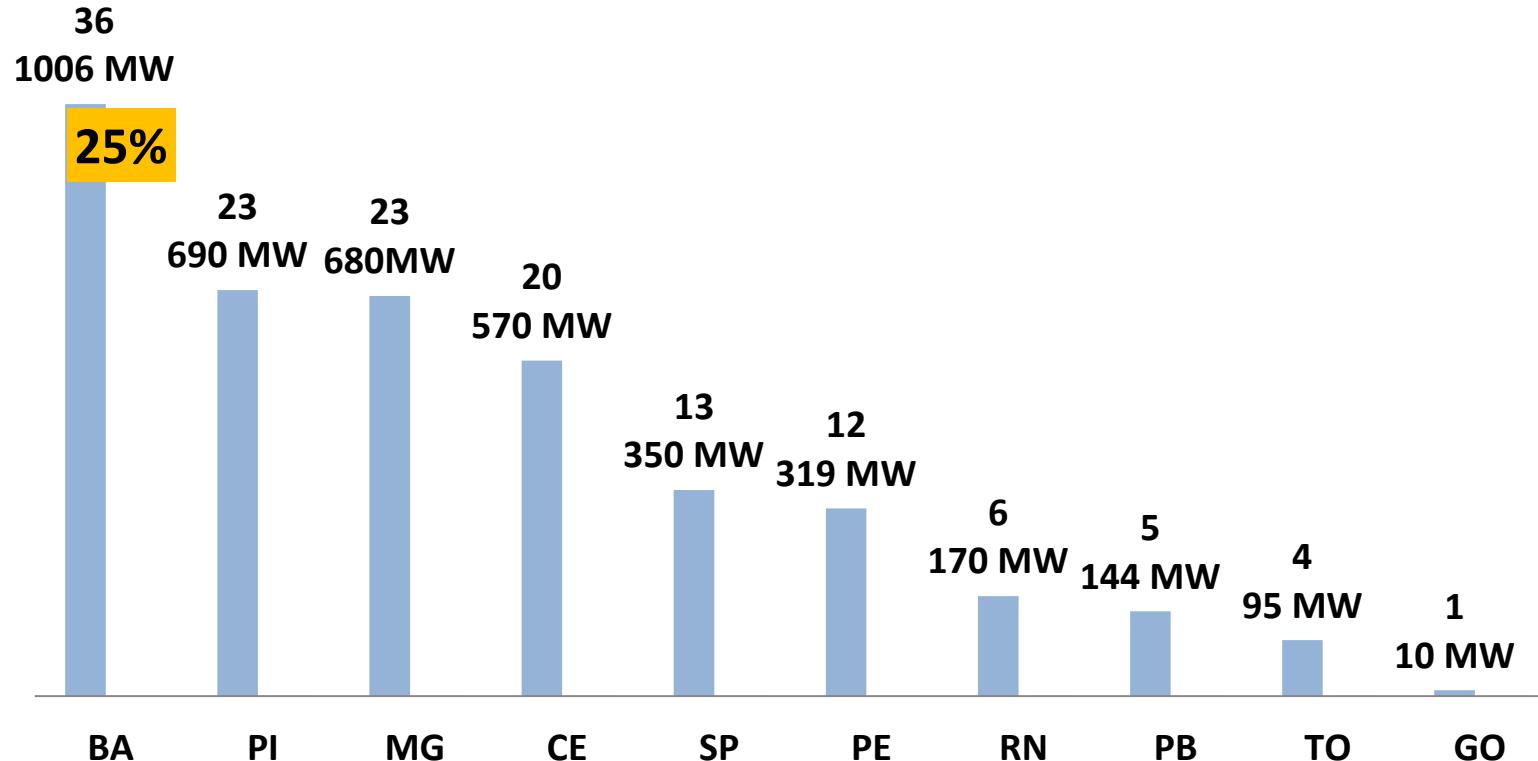


# SOLAR ENERGY

## REGULATED MARKET

### Comparison between States

#### RANKING MARKETING AUCTIONS



# SOLAR ENERGY

## MAIN MUNICIPALITIES QUARTZ PRODUCERS | BAHIA

- Reserve Measure: 189,551,065 t

## QUARTZ OF CASTRO ALVES | CBPM / LAGOA RAW MATERIALS

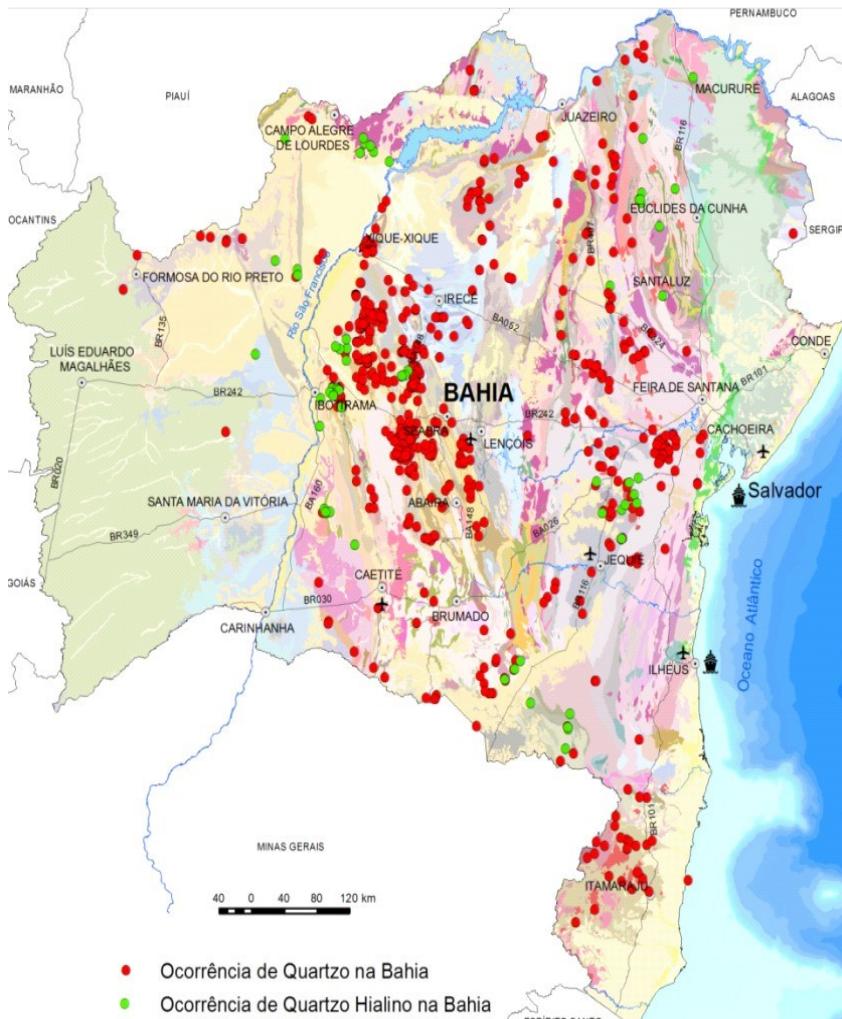
- Quartz: 99% SiO<sub>2</sub> (with contaminants)
- Reserve Measure: 230,084 t
- Total Reserve: 15,608,089 t

## QUARTZ OF BROTAS OF MACAÚBAS

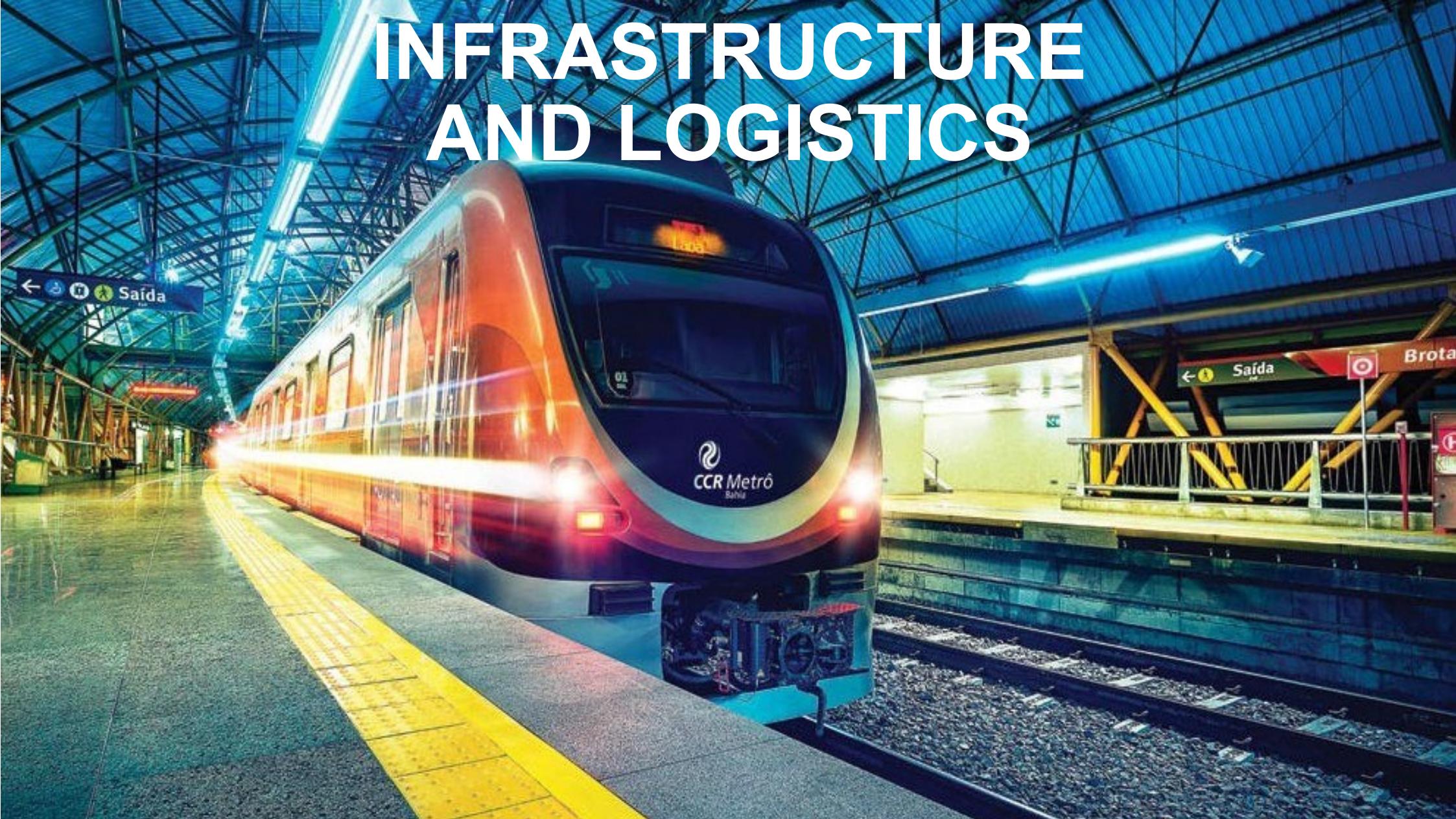
- Low impurities: Boron and Phosphorus

## QUARTZ OF TANHAÇU

- Minas Stones project: mining and processing of quartz
- Quartz: 97% to 99% SiO<sub>2</sub> (low impurities)
- Production: 480,000 t / year
- Mine life: 60 years
- Operation began in: July / 2017



# INFRASTRUCTURE AND LOGISTICS



# SALVADOR METRO

Investment: **R\$ 5,8 billions**, with resources of Bahia State and of Federal Government.

Construction and operation (**PPP**) by CCR Metrô Bahia, concession terms - 30 years.

Start up: June 11th 2014.

Two lines: **42 km long, 23 stations and 10 bus integration terminals** .

Third biggest subway system in Brazil, after São Paulo and Rio de Janeiro

Daily average of passengers transported: **380.000**

## Projected Extensions :

Airport - Lauro de Freitas **4 km**

Pirajá - Águas Claras **5 km** - construction: public works e operação:CCR

Lapa Station - Barra **3 km** (underground line) – under project

## Alternatives to the implementation of the line Lapa - Barra:

Amendment to the PPP contract to building and operation by CCR.

Amendment to the PPP concession contract, only for operation.

It is economically unfeasible to have a PPP just for the construction and operation of this line.

Yet condering investments in infrastructure, signaling, control and in trains.



# LIGHT VEHICLES ON RAILS - LVR ROUTES:

## PROJECTS

- Implementation of Transportation System which will link Comercio to Station Sao Luiz.
- Interconnection with Santa Luzia Station, allowing integration with the Metro.

### Investment Planned

- US \$ 460 million



# URBAN MOBILITY

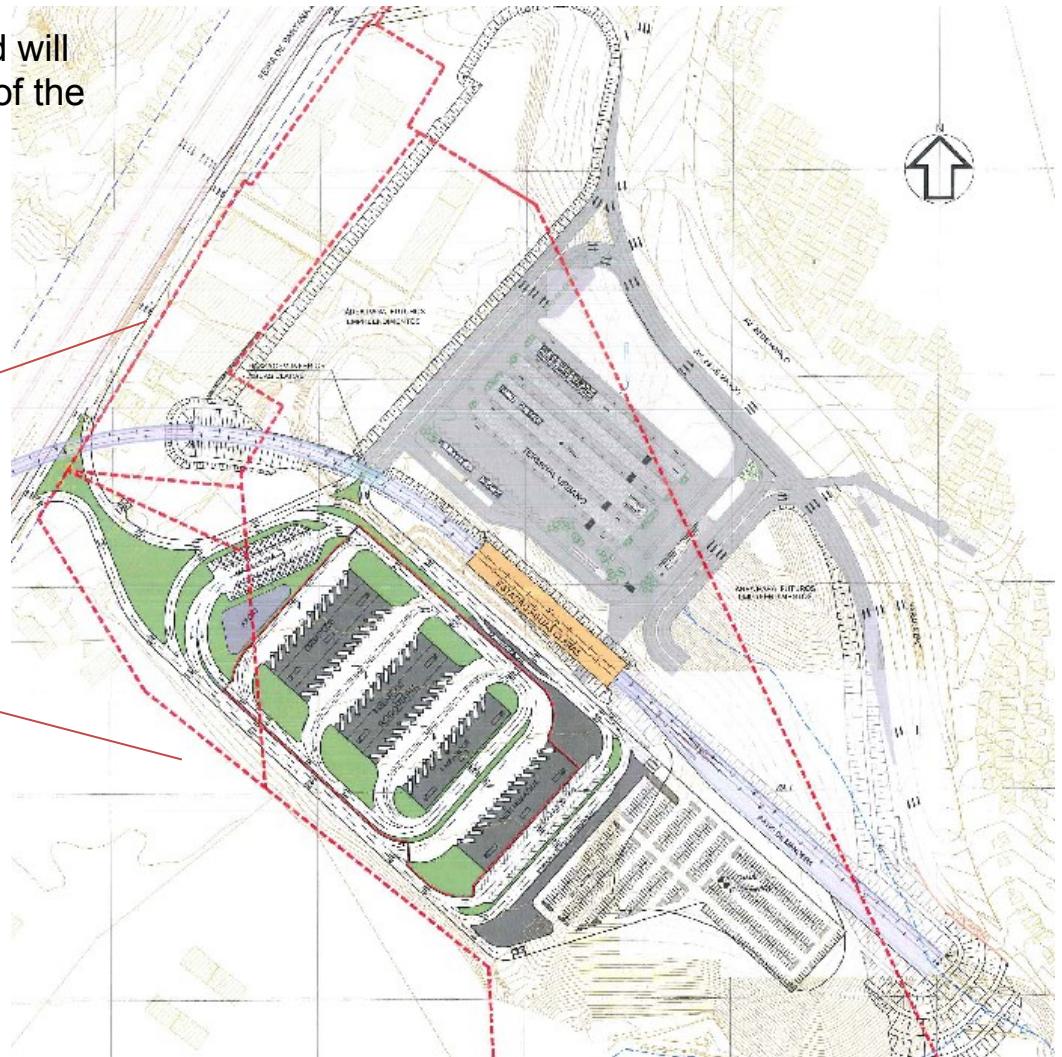


# NEW ROAD TERMINAL

It will be built in the BR-324 (Águas Claras neighborhood) and will connect with Section 3 of the subway, an extension of Line 1 of the modal.

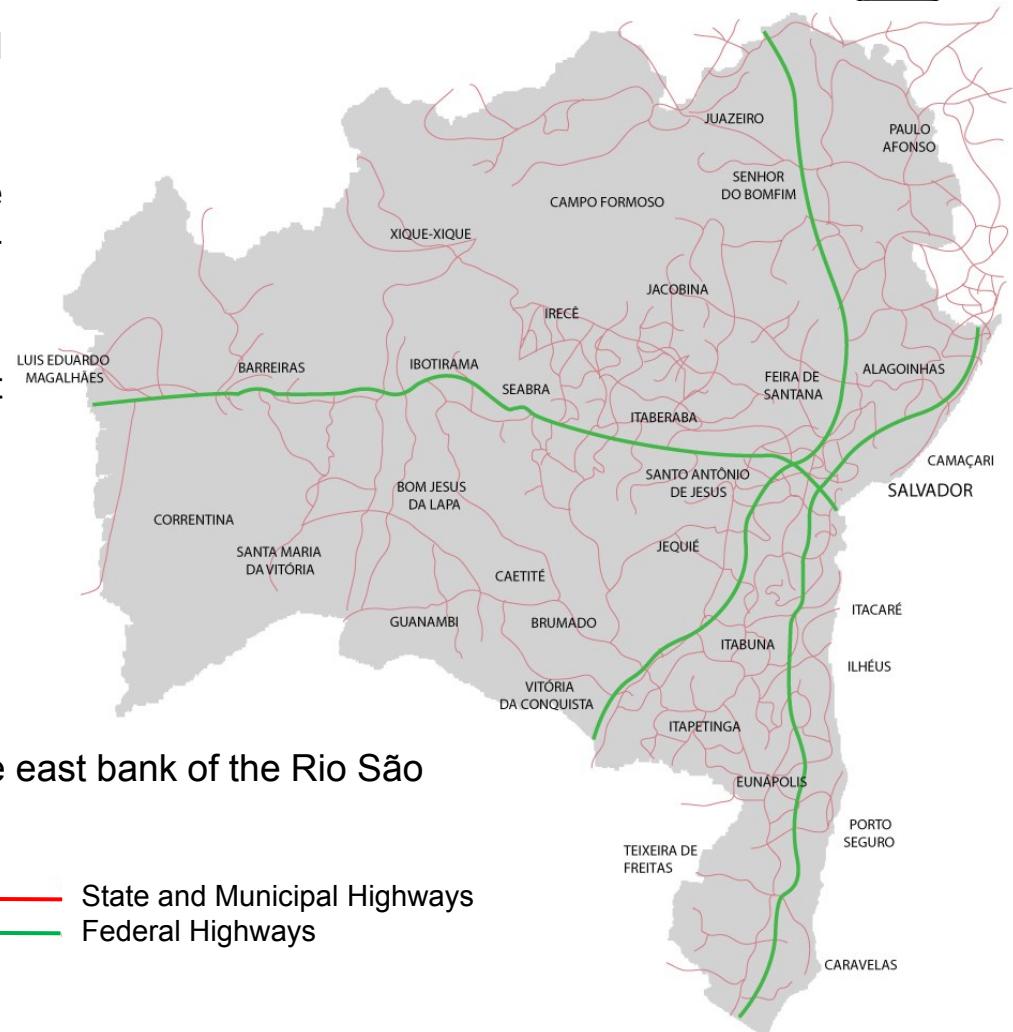
- Total Area: 263,000m<sup>2</sup>
- Average users benefited: 39,000 / day
- Planned Investment: R \$ 120 million

Direct Access to the new BRT corridor and the Subway.



# INFRASTRUCTURE | HIGHWAY

- Extension of 124,545 km including federal, state and municipal highways.
- Structured on four main axes, allowing full integration of the state with all regions of Brazil and with Mercosur: BR-116, BR-101, BR-324, BR-407 and BR-242.
- Bahia has other federal and state roads, in permanent modernization and expansion processes.
- The BA-052 System is composed of four state roads (BA-052, BA-148, BA-534, BA-160 and BA-432), totaling approximately 686.7 km in length..



## FLUVIAL CONNECTION

BA-160 currently connects the municipality of Xique-Xique to the east bank of the Rio São Francisco, in the municipality of Barra, by means of rafts.

# SALVADOR - ITAPARICA BRIDGE

IN BIDDING



# SALVADOR - ITAPARICA ISLAND BRIDGE

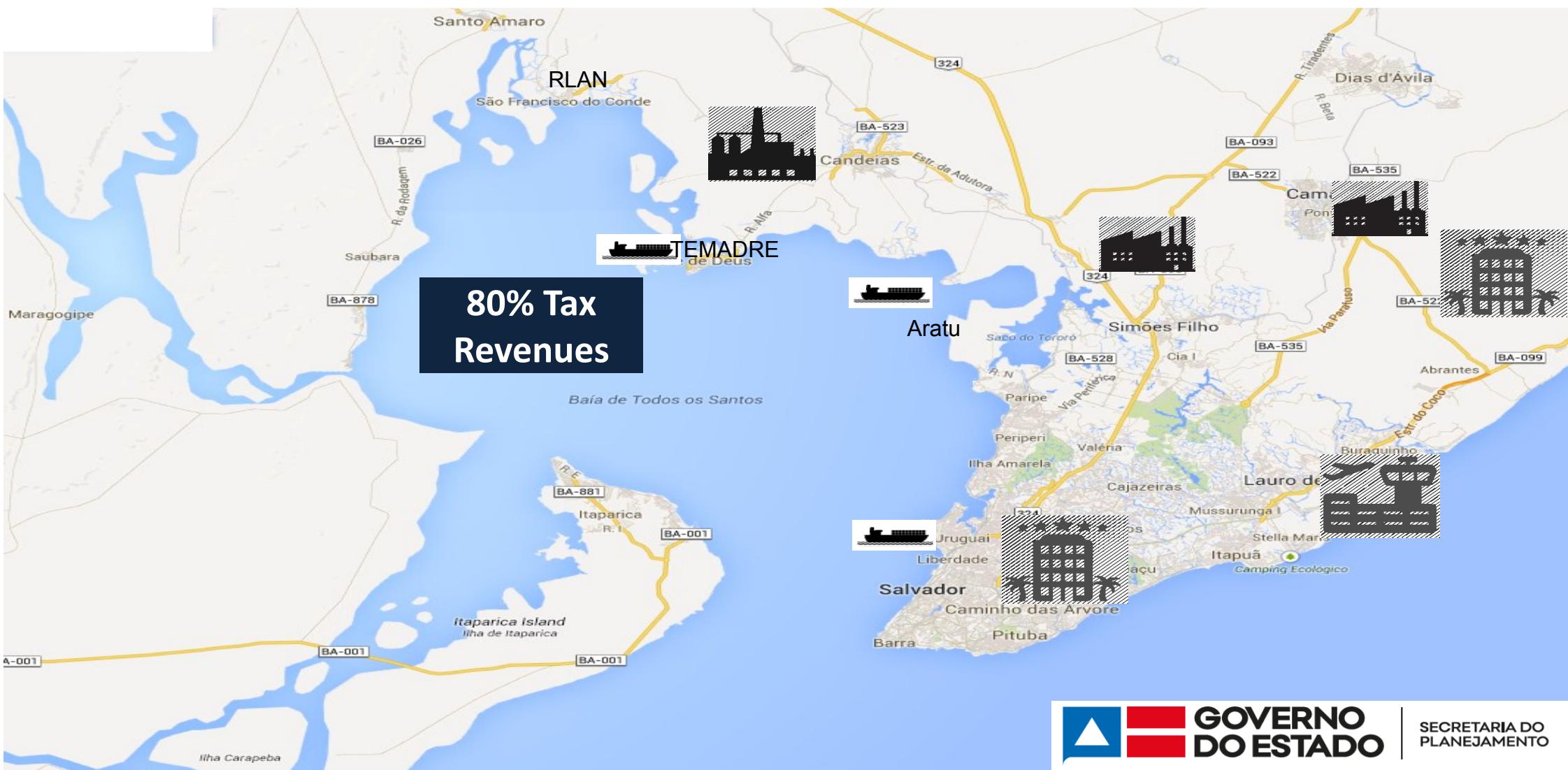
## Regional Development Plan



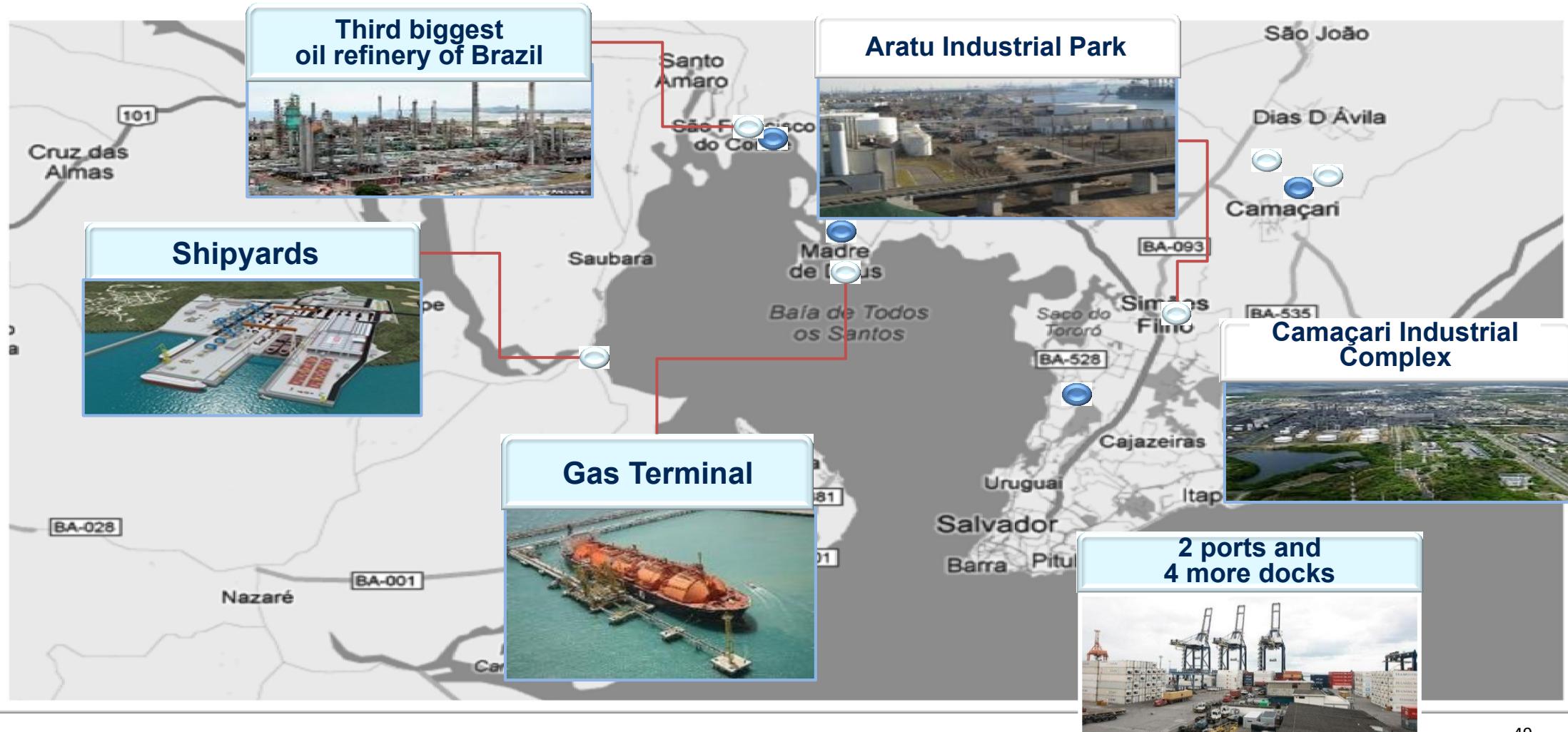
# Close view of the new axis



# Bay area urban and economic concentration



# Greater Economic Density within the North/Northeastern Region



# SALVADOR - ITAPARICA ISLAND BRIDGE



# Economy of more than 100 km in displacements . Examples:



**Salvador - Santo Antônio de Jesus**

- 100km

**Salvador - Valença**

- 144km

**Salvador - Ilhéus**

- 142km

**SSA - Belmonte, com implantação de Canavieiras - Belmonte**

- 283 km

# SALVADOR - ITAPARICA BRIDGE

Western Road System: stretches between Salvador and Itaparica



# SALVADOR - ITAPARICA BRIDGE

Western Road System: stretches between Salvador and Itaparica



# SALVADOR - ITAPARICA BRIDGE

## EXTENSION:

- The Bridge of about 12.3 km in length has a cable-stayed bridge of 1,000 m in length and stretches of approach spans of 7.2 km from the side of Salvador and 4.1 km from the side of the Island of Itaparica;
- The Salvador Highway System is about 4.2 km long, including a set of 2.1 km viaducts and 2 tunnels with extensions of about 160 and 220 m.
- The Itaparica Road System is about 47.5 km long and comprises the arrival area from the Salvador Bridge - Itaparica Island to the Funil Bridge, through the requalification and duplication of the current BA-001 highway and a new projected highway, called Variant.

## TRACKS OF THE BRIDGE:

- Stretches of Approach spans on the Itaparica side;
- Cable-stayed stretch;
- Sections of Approach spans on the Salvador side.

# INFRASTRUCTURE | PORTS

**1 PORT OF MALHADO – ILHÉUS Capacity:**  
1 million t / year Main grain exporter from Bahia.



**2 PORT OF SALVADOR Capacity:**  
5 million t / year Containers, general cargo, wheat, pulp, reception of maritime cruises.



**3 PORT OF ARATU Capacity:**  
6 million t / year 4 terminals. Liquid, gaseous and solid products. It simultaneously operates ores and petrochemicals.

## TWO TERMINALS PROJECT IN THE SOUTH PORT FOR MINING AND AGRICULTURAL

- Location: District of Aritaguá, north coast of Ilhéus.
- Total investment: US \$ 757.57 million
- Total land area: 1,860 hectares.
- Maritime area: 3.5 km *offshore* bridge and 01 cradle of iron ore and agricultural granaries.
- Vegetation Suppression Authorization (ASV).

- Expected timeline:

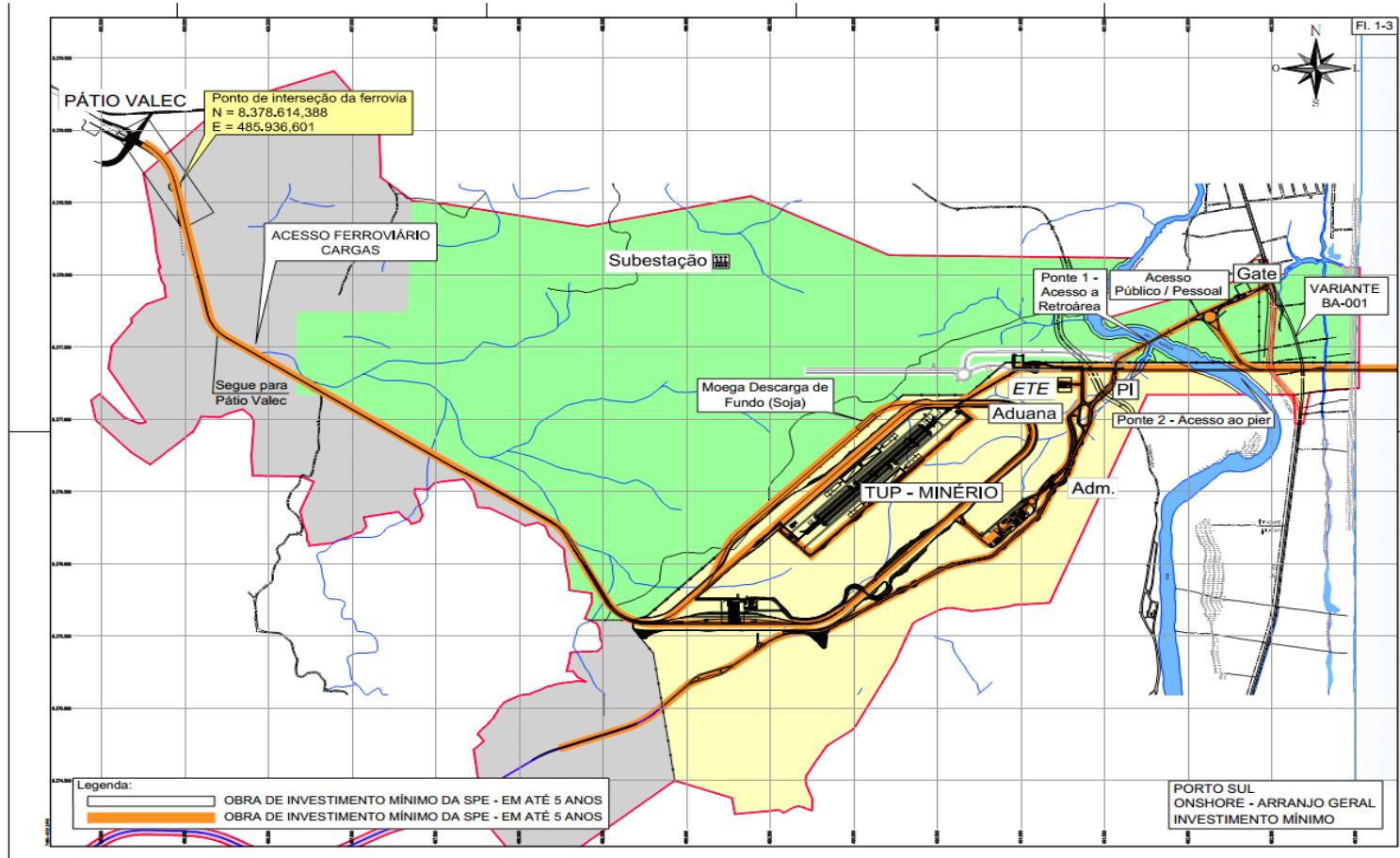
2019	Initial activities of the project (access roads by BA 001 and BA 262, construction of the bridge over Rio Almada, etc.)
2020 - 2023	Construction
2023	Operation



# POR TS

## ONSHORE INSTALLATIONS

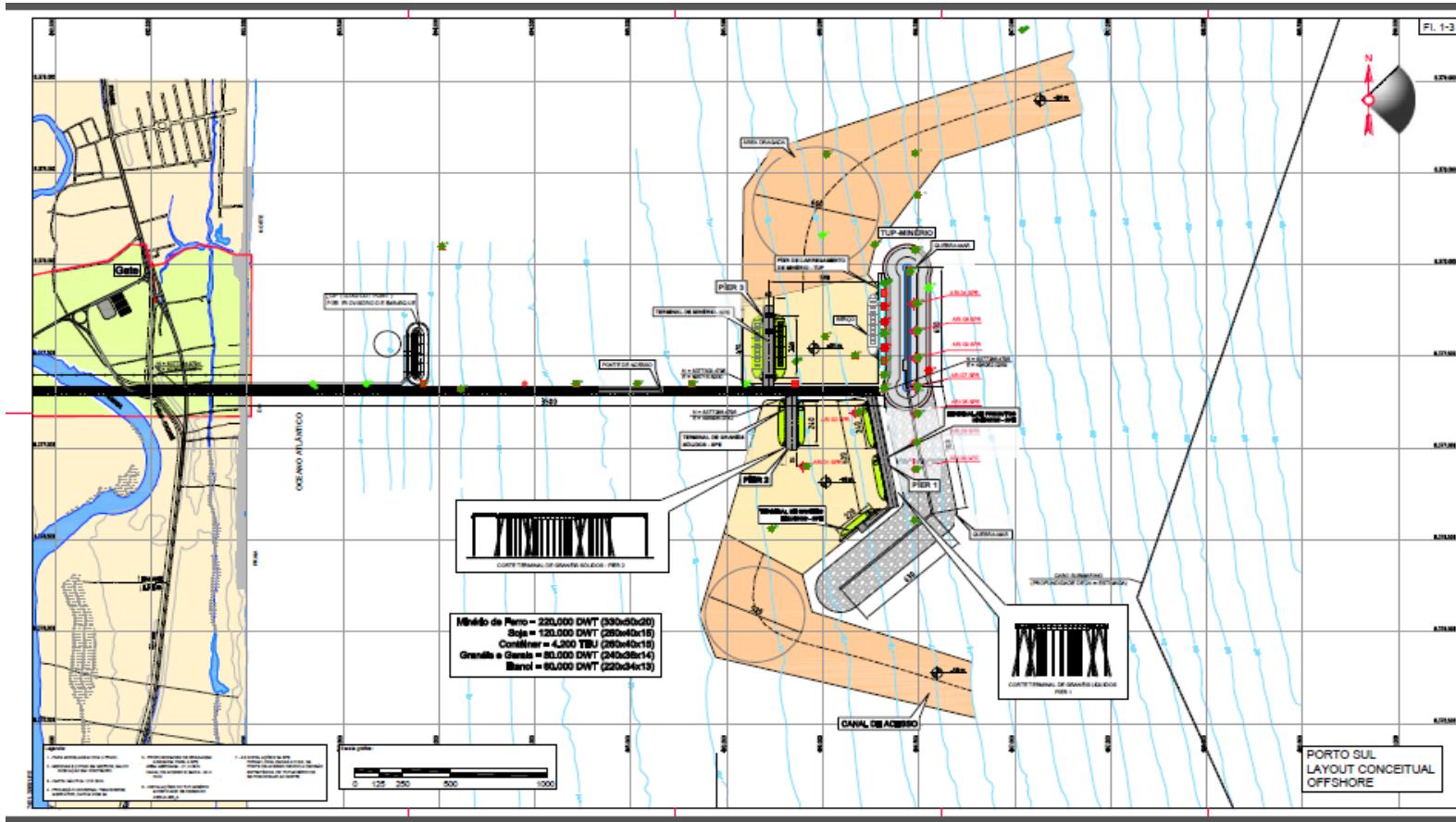
Final design (yellow area) / expansion area (green and gray)





## OFFSHORE INSTALLATIONS

# Final project



# NEW PORT OF ARATU

## PROJECT FOR IMPLEMENTATION OF PRIVATE USE TERMINALS - COTEGIPE CHANNEL

- Consolidated area for the implementation of productive units
- Specific Purpose Society (SPE) modality



- Purpose: implementation of logistic projects with storage area and retro-area.
- Area for general cargo, containers, vehicles, liquid and solid granules (minerals)

# NAVAL INDUSTRY

## ENSEADA | TERMINAL OF PRIVATE USE MARAGOGIPE

Enseada is Bahia's largest private investment in recent years, and it has consolidated all the knowledge and expertise of its shareholders in the shipbuilding and offshore segment. The shipyard was designed by Kawasaki Heavy Industries aiming to have productivity and quality to compete in the international market, and is located where the waters of Bahia de Todos os Santos and Rio Paraguaçu meet.



# NAVAL INDUSTRY

## STRATEGIC LOCATION



DEEP WATERS

SHELTERED WATERS

NO ATTRACTION COMPETITION



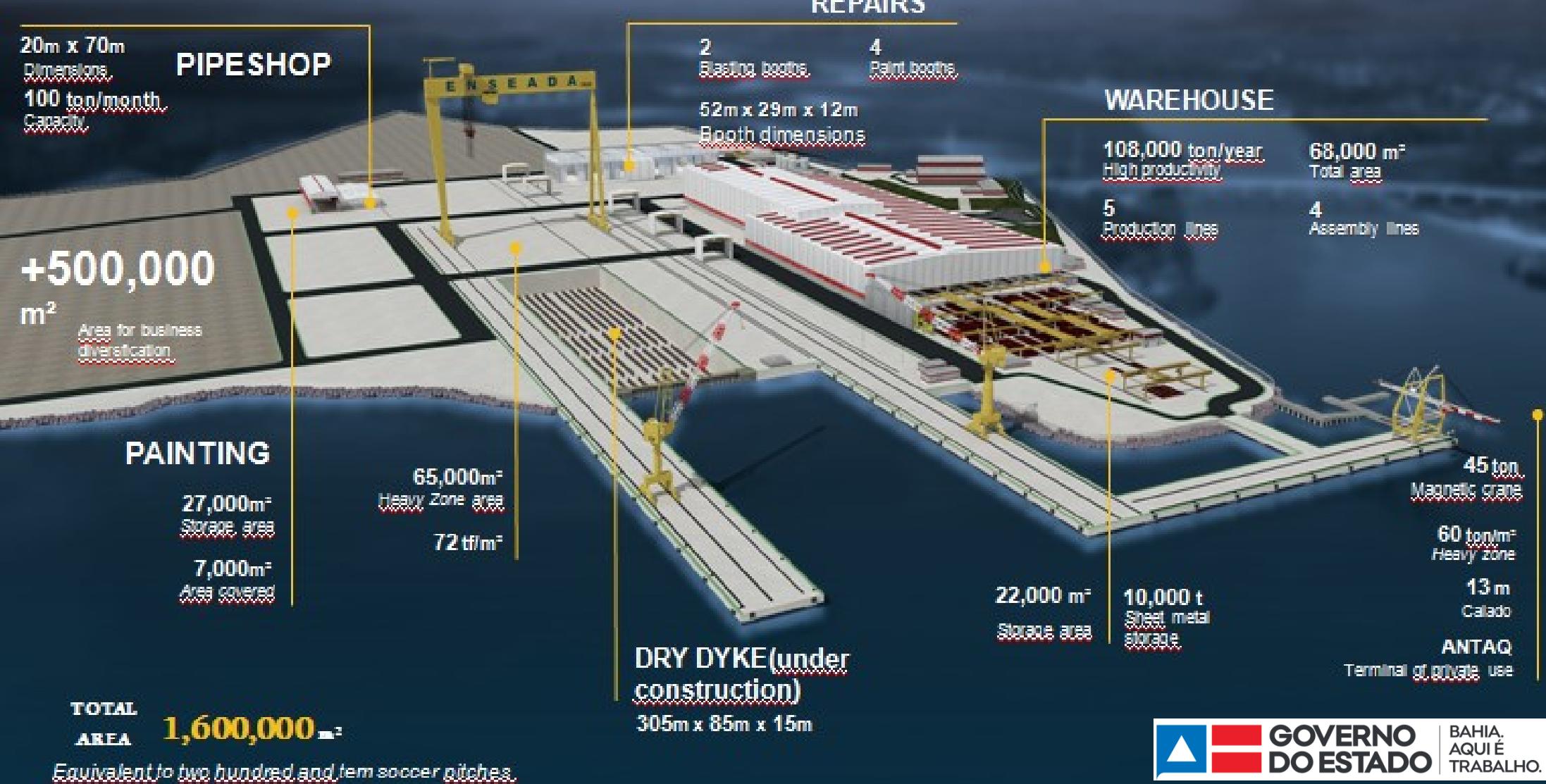
SHELTERED WATERS

DEEP WATERS

NO ATTRACTION COMPETITION

# NAVAL INDUSTRY

## ENSEADA | OUR SHIPYARD



## ENSEADA | OTHER OPPORTUNITIES

Enseada is more than a shipyard, it is an **industrial-logistical** hub that will work by sharing the shipyard's infrastructure with other businesses being deployed. Among the main businesses are:



### LIQUID TERMINAL

Terminal with capacity to store more than 100 thousand m<sup>3</sup> of derivatives with privileged road access. Possibility of blending in loco.



### SOLID TERMINAL

Recebimento, armazenagem e distribuição de cargas a granel com área exclusiva dedicada.



### SPOOLBA SE

40,000m<sup>2</sup> shore-based facility to manufacture continuous pipe laying for offshore oil and gas production up to 1,000m length.



### GENERAL CARGO

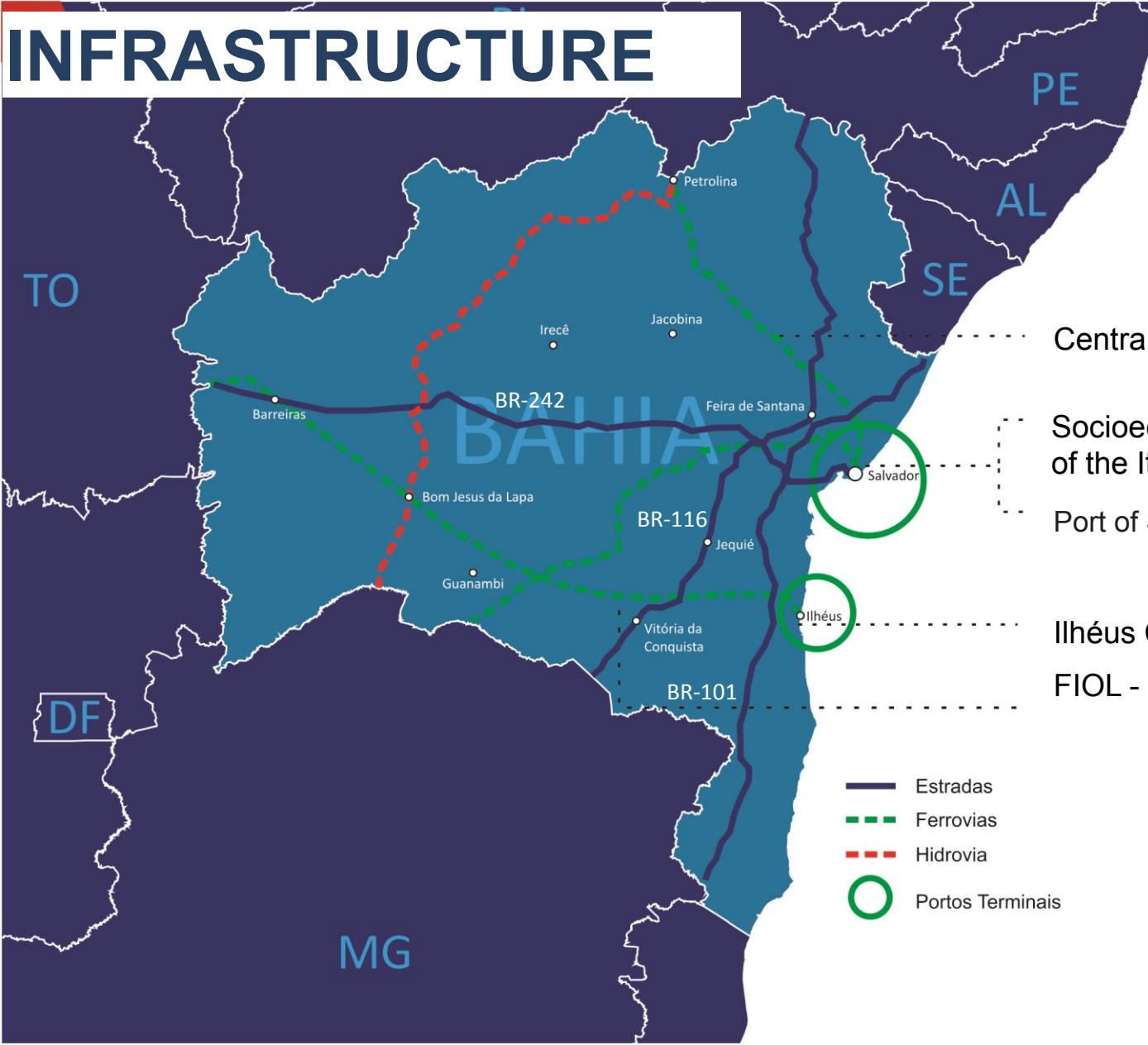
Carregamento, descarregamento e armazenagem de cargas gerais de grandes dimensões, como módulos industriais e equipamentos de energia eólica.

**TERMINAL OF PRIVATE USE**

**+500.000 m<sup>2</sup> available**

**4 BERTHS FOR LOADING AND UNLOADING**

# INFRASTRUCTURE



Central Atlantic Railway (FCA)

Socioeconomic development of the influence area  
of the Itaparica bridge - Salvador

Port of Salvador

Ilhéus Complex - South Port

FIOL - West-East Integration Railway

- Estradas
- Ferrovias
- Hidrovia
- Portos Terminais



# INFRASTRUCTURE | RAILROAD

## CENTRO-ATLÂNTICA RAILROAD - FCA

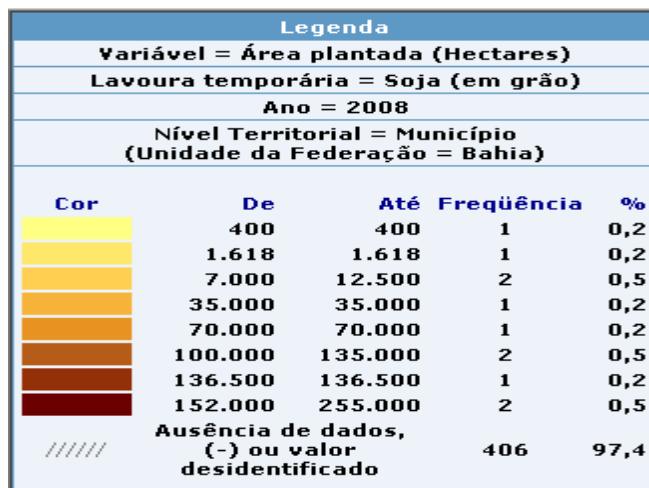
Main axis of railway connection between Bahia and the Northeast, Southeast and Center-West regions and with access to the main ports located in the States of Bahia, São Paulo and Rio de Janeiro.

It also connects with other railroads such as MRS, Transnordestina and Ferroban, making it possible to connect with the largest consumer centers in Brazil and Mercosur.

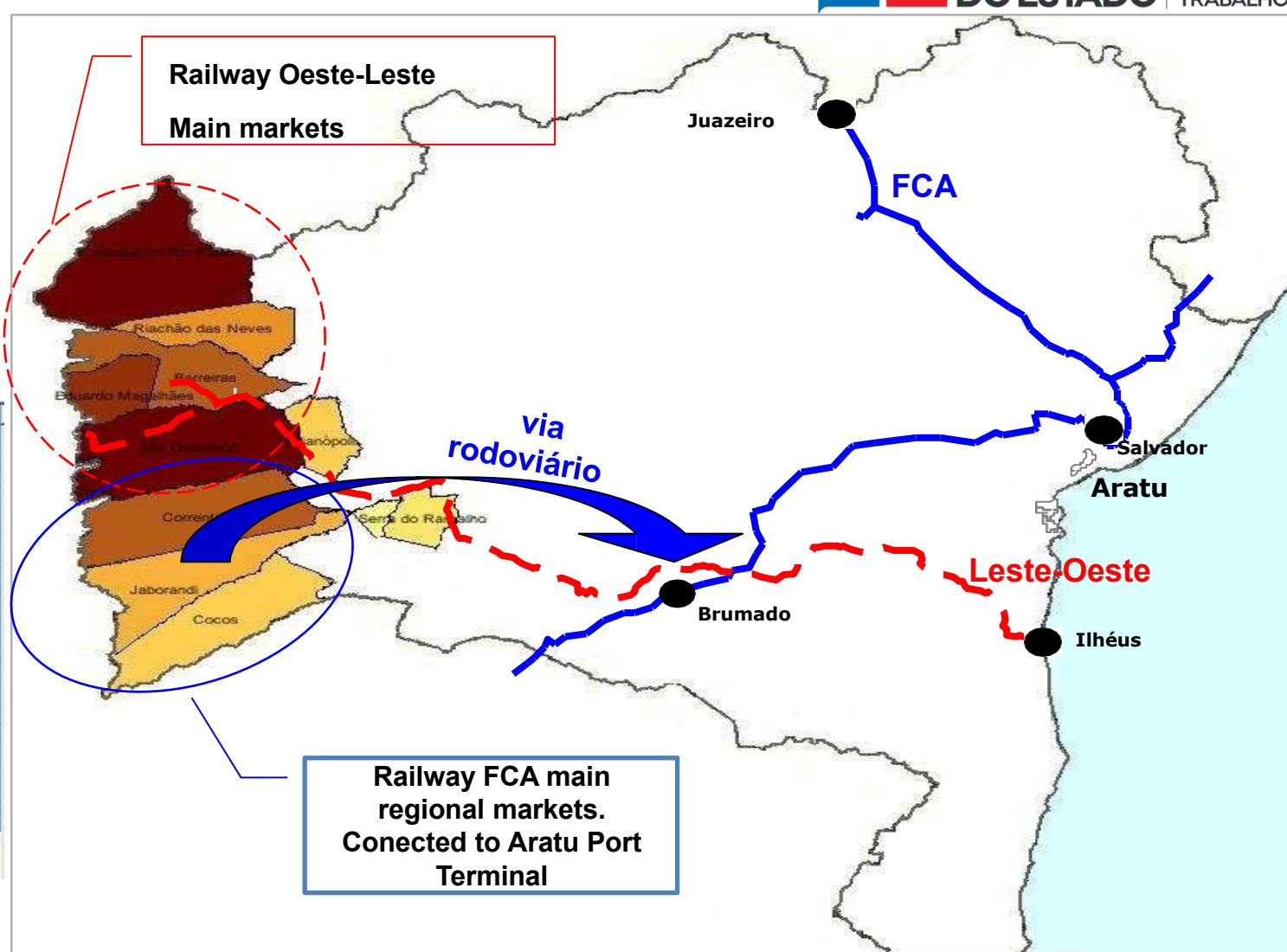


# Oeste – Leste Railway

## Multimodal Transports Corridor



Fonte: IBGE - Produção Agrícola Municipal



Fonte: SECEX

# Railway System



# New rail projects in Feira de Santana area

## Railways projects options to Paraguaçu Valley



# FERROVIA CENTRO ATLÂNTICA - FCA

Implantação do ramal Porto de Aratu / Feira de Santana / Iaçu (235 km): eliminar o gargalo entre Cachoeira / São Felix e viabilizar o escoamento de minérios.

Capacidade assegurar o escoamento de 11 milhões de toneladas/ano.

Investimentos aprox. de **US\$ 484,5 milhões**.

Trechos na Bahia:

- Salvador (BA) / Propriá (SE) | 537 km
- Alagoinhas (BA) / Juazeiro (BA) | 450 km
- Simões Filho (BA) / Divisa entre BA e MG | 854 km



# CENTRO ATLÂNTICA RAILWAY - FCA

Implantation of the Aratu / Feira de Santana / Iaçu branch (235 km): eliminate the bottleneck between Cachoeira / São Felix and make it possible to transport ores production.

Capacity to ensure the flow of 11 million tons / year.

Investments approx. of **US \$ 484.5 million**.

Strech in Bahia :

- Salvador (BA) / Propriá (SE) | 537 km
- Alagoinhas (BA) / Juazeiro (BA) | 450 km
- Simões Filho (BA) / border city between BA and MG | 854 km.



# RAILWAYS

## FIOL / BIOCEAN RAILWAYS

Oceano  
Pacífico



# RAILWAYS

## FIOL - Concession

- Studies of EVTE (Economic Viability), investments made: R \$ 2.5 million
- Public hearings held in Ilheus and Brasilia in 2018;
- Estimated concession: 2019 - 1st stretch: Ilhéus / Ba to Caetité / Ba



# RAILWAYS

## FICO / FIOL

Railroad under construction with estimated 1,641 km, part of the connection between the Atlantic oceans in Brazil and the Pacific in Peru.

- EVTE studies were carried out - from the municipality of Água Boa (MT) to Ilhéus (BA)

— Campinorte (GO) / Vilhena(RO)



# INFRASTRUCTURE | AIRPORTS



## SALVADOR INTERNATIONAL AIRPORT

3rd largest airport infrastructure in Brazil  
8th largest in number of passenger in the Country  
Ability to serve 11 million passengers per annum



## ILHÉUS AIRPORT

Capacity to serve 700,000 passengers per year



## AIRPORT OF PORTO SEGURO

Serves 1.8 million passengers per year



- SALVADOR / LISBOA
- SALVADOR / MADRID
- SALVADOR / BUENOS AIRES
- PORTO SEGURO / BUENOS AIRES
- SALVADOR / BOGOTÁ
- SALVADOR / CÓRDOBA
- PORTO SEGURO / CÓRDOBA
- SALVADOR / MIAMI
- SALVADOR / ILHA DO SAL  
(início em Junho/2018)
- SALVADOR / CIDADE DO PANAMÁ  
(início em Julho/2018)





## Concession Jorge Amado Airport - ILHÉUS



Approx. 700 thousand passengers / year (Third largest in numbers of passengers in the state of Bahia with capacity to operate large aircraft, such as Boeing 737 800, A318, EMB195);  
About 10 thousand aircraft operations per year.

- Estimated investment: US \$ 13 million



## Airport - PORTO SEGURO

Project for expansion of the passenger terminal, recovery of the runway and landing, parking of aircraft, parking of vehicles, new KF, reform of the section against fire, expansion night beacon.

- Estimated investment: US \$ 6 million
- 1,800 passengers per year

REFERENCE INSTITUTION IN EDUCATION, RESEARCH, DEVELOPMENT AND INNOVATION RETURNED TO THE INDUSTRY, CONSIDERED. THE BEST UNIVERSITY CENTER FOR HIGHER EDUCATION IN NORTH / NORTHEAST ENGINEERING AND ONE OF THE COUNTRY'S MAIN INSTITUTIONS OF SCIENCE AND TECHNOLOGY (ICTs)

## AREAS OF EXPERTISE

- Software and supercomputing, biotechnology and health, advanced manufacturing, mobility and infrastructure, energy and sustainability, new products, materials and metrology, other skills.
- RD & I, operating research projects of high national and international impact.

## CIMATEC INDUSTRIAL

- Large technological and industrial complex in an area of 4 million m<sup>2</sup>
- Advanced laboratories, large-scale pilot plants, safety areas for testing and risk operations, multi-purpose test track for technological innovation projects for the automotive sector.

## CIMATEC YEMOJA SUPERCOMPUTER

Faster Latin America 3D and 4D seismic data processing of pre-salt industrial dimensions.



## FLATFISH

- Subsea self-propelled vehicle
- Used for high resolution 3D visual inspection.



# SANITATION

## Metropolitan Region of Salvador – RMS

A RMS, also known as Greater Salvador and by the acronym RMS, was instituted by Federal Complementary Law No. 14, dated 06/08/1973. With 3,899,533 inhabitants according to the Brazilian Institute of Geography and Statistics (IBGE) estimate for 2018, becomes the second largest urban agglomeration in the Brazilian Northeast and the seventh in Brazil, concentrating approximately 43.94% of the state GDP. It comprises the municipalities of Camaçari, Candeias, Dias d'Avila, Itaparica, Lauro de Freitas, Madre de Deus, Mata de São João, Pojuca, Salvador, São Francisco do Conde, São Sebastião do Passé, Simões Filho and Vera Cruz.

Características geográficas	
<b>Área</b>	4 375,123 km <sup>2</sup> <sup>[1]</sup>
<b>População</b>	3 899 533 hab. <i>Estimativa IBGE/2018</i>
<b>Densidade</b>	891,3 hab./km <sup>2</sup>
<b>IDH</b>	0,743 – <i>Elevado</i> PNUD/2010
<b>PIB</b>	R\$ 107 670 081 mil <i>IBGE/2015</i>
<b>PIB per capita</b>	R\$ 27 235,56 <i>IBGE/2015</i>

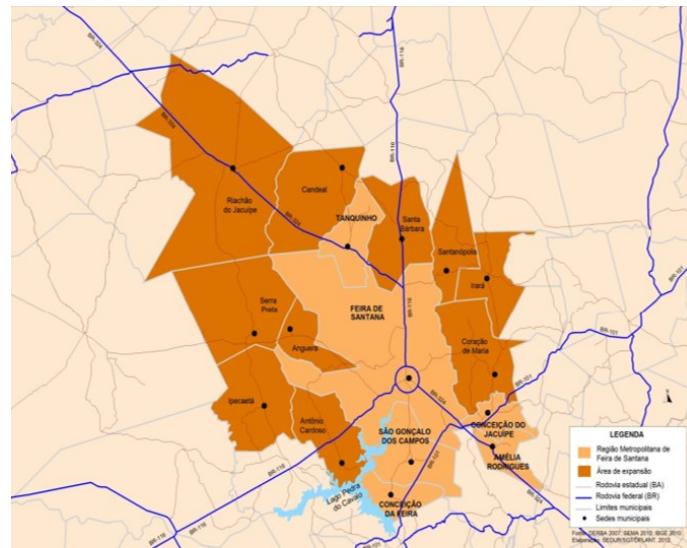


# SANITATION

## Metropolitan Region of Salvador - RMS

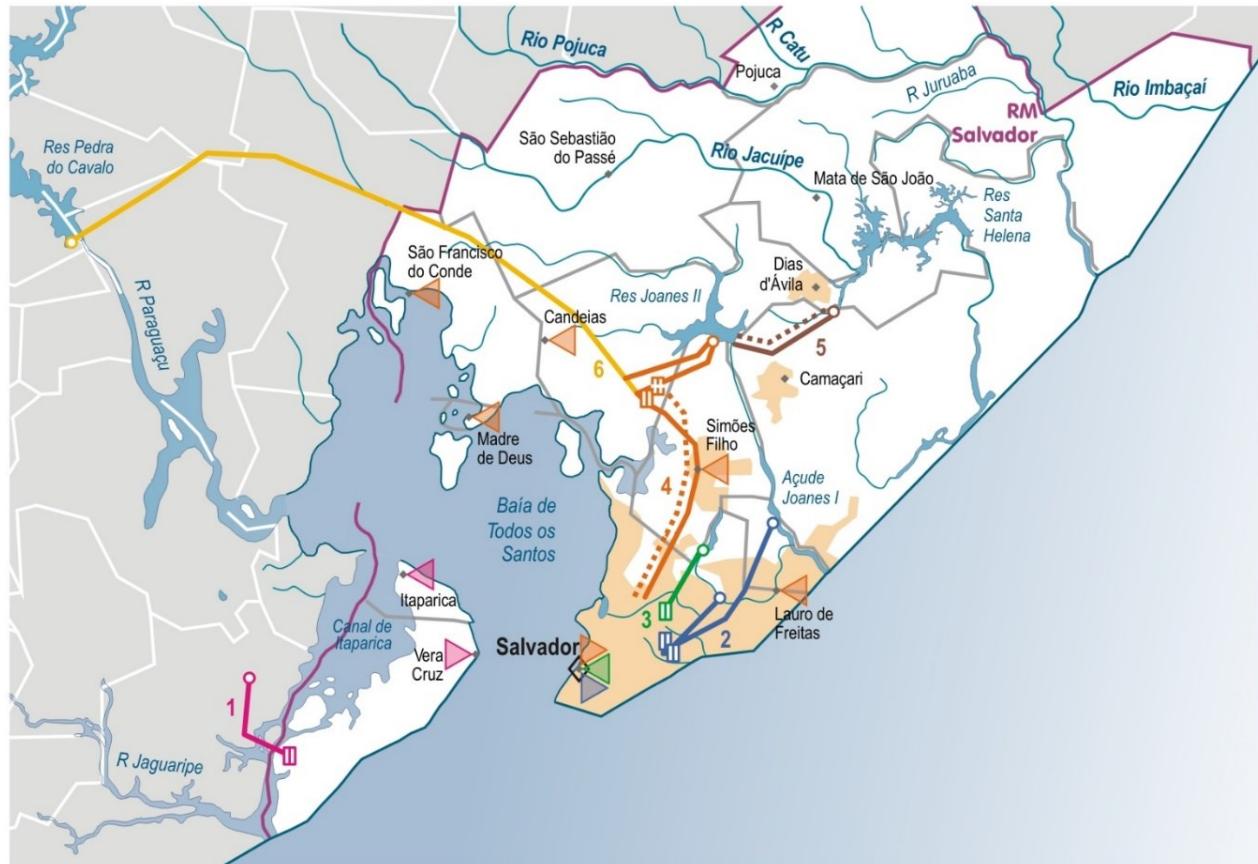
Created by the complementary state law nº. 35 of 06/07/2011, the metropolitan region of Feira de Santana would encompass 15 municipalities, but in principle only six cities would be included: Amélia Rodrigues, Conceição da Feira, Conceição do Jacuípe, Feira de Santana, São Gonçalo dos Campos and Tanquinho, and the others will be incorporated during the second phase of the project. There will be included **Anguera**, **Antônio Cardoso**, **Candela**, **Heart of Mary**, **Ipecaetá**, **Irará**, **Riachão do Jacuípe**, **Santa Bárbara**, **Sertanópolis** and **Serra Preta**.

Características geográficas	
<b>Área</b>	2 265,426 km <sup>2</sup> <sup>[1]</sup>
<b>População</b>	786 086 hab. <i>Estimativas/IBGE/2014</i>
<b>Densidade</b>	346,99 hab./km <sup>2</sup>
<b>IDH</b>	0,687 – <b>Médio</b>
<b>PIB</b>	R\$ 14.305.998 bilhões <i>IBGE/2014</i> <sup>[2]</sup>
<b>PIB per capita</b>	R\$ 18.199 024

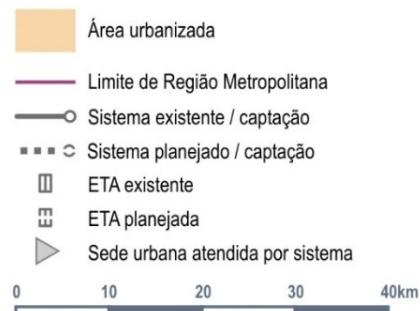


# SANITATION

## WATER SUPPLY SYSTEM RMS

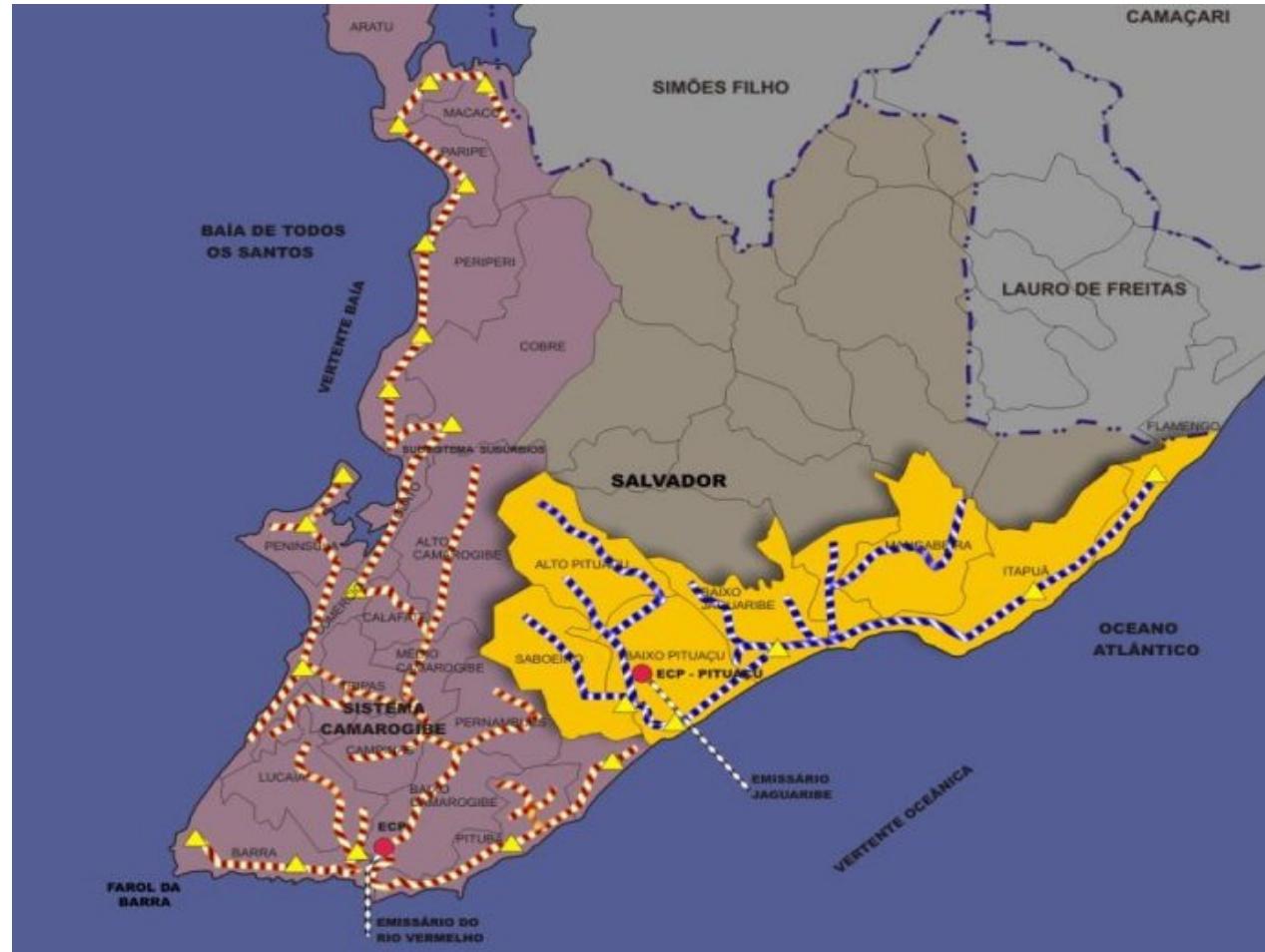


- 1 SIN Itaparica-Vera Cruz
- 2 SIS Ipitanga I-Joanes I (Parque Bolandeira)
- 3 SIS Ipitanga II (ETA Suburbana)
- 4 SIN Salvador-Lauro de Freitas-ETA Principal
- 5 Sistema Adutor Santa Helena-Joanes II
- 6 Sistema Adutor Pedra do Cavalo



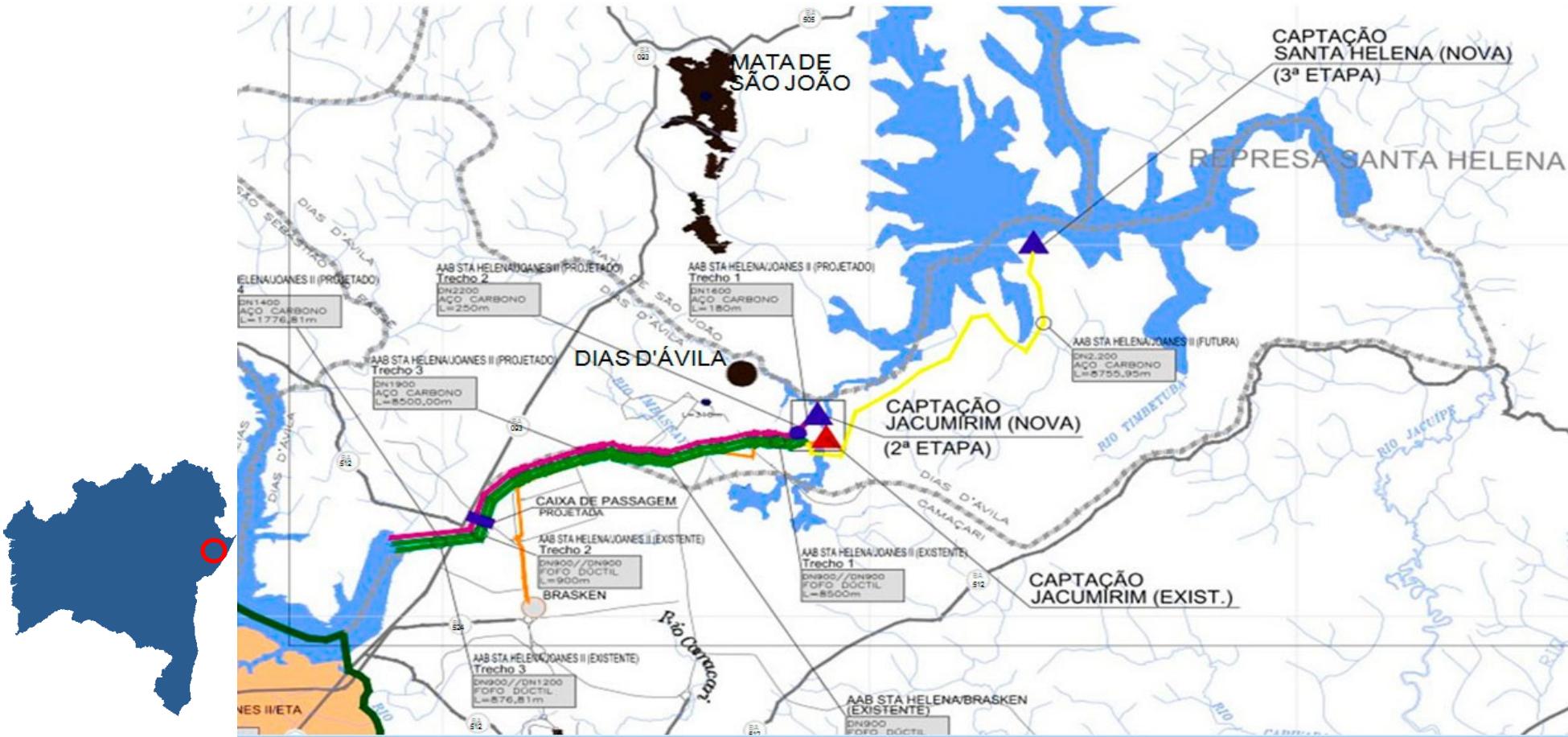
# SANITATION

## SANITARY SEWAGE SYSTEM Metropolitan Region of Salvador



# WATER SUPPLY EXPANSION

## TRANSPOSITION of SANTA HELENA DAM to JOANES II TRANSPOSITION – SALVADOR



# WATER SUPPLY INFRASTRUCTURE

## ENLARGEMENT OF THE TRANSPOSITION SANTA HELENA - JOANES II

- The Integrated System of Water Supply - SIAA Salvador: Salvador, Lauro de Freitas, Simões Filho, Candeias, Madre de Deus and São Francisco do Conde and it includes the use of the reservoirs from Pedra do Cavalo, Joanes II and Joanes I dams;
- The investment for works of capture and elevation and raw water supply is estimated at US \$ 94,000,000 (ninety-four million dollars) and will benefit a population of 3,419,917 inhabitants (beginning of plan - year 2015) and 4,400 .793 (end of plan - year 2040);
- Locations and industries: Salvador, Lauro de Freitas, Simões Filho, Candeias, São Francisco do Conde and Madre de Deus, SIAA of Amélia Rodrigues and Santo Amaro; and Braskem Industrial Parks, Camaçari Logistics Center, Petrobrás and CIA Norte.

# TRANSPORTATION POJUCA - SANTA HELENA

## STEP 1

- Implementation of level dam for water capture;
- Raw water elevation (4 sets);
- Raw water adductor(10.8 Km);
- Flow rate: 2 m<sup>3</sup> / s
- Estimated investment: US \$ 48.5 million

## STEP 2

- Construction of a storage dam by using the level dam;
- Adductor of raw water parallel to the adductor from Step 1;
- New Water Treatment Plant
- Flow rate: 9.5 m<sup>3</sup> / s
- Estimated investment: US \$ 157.6 million

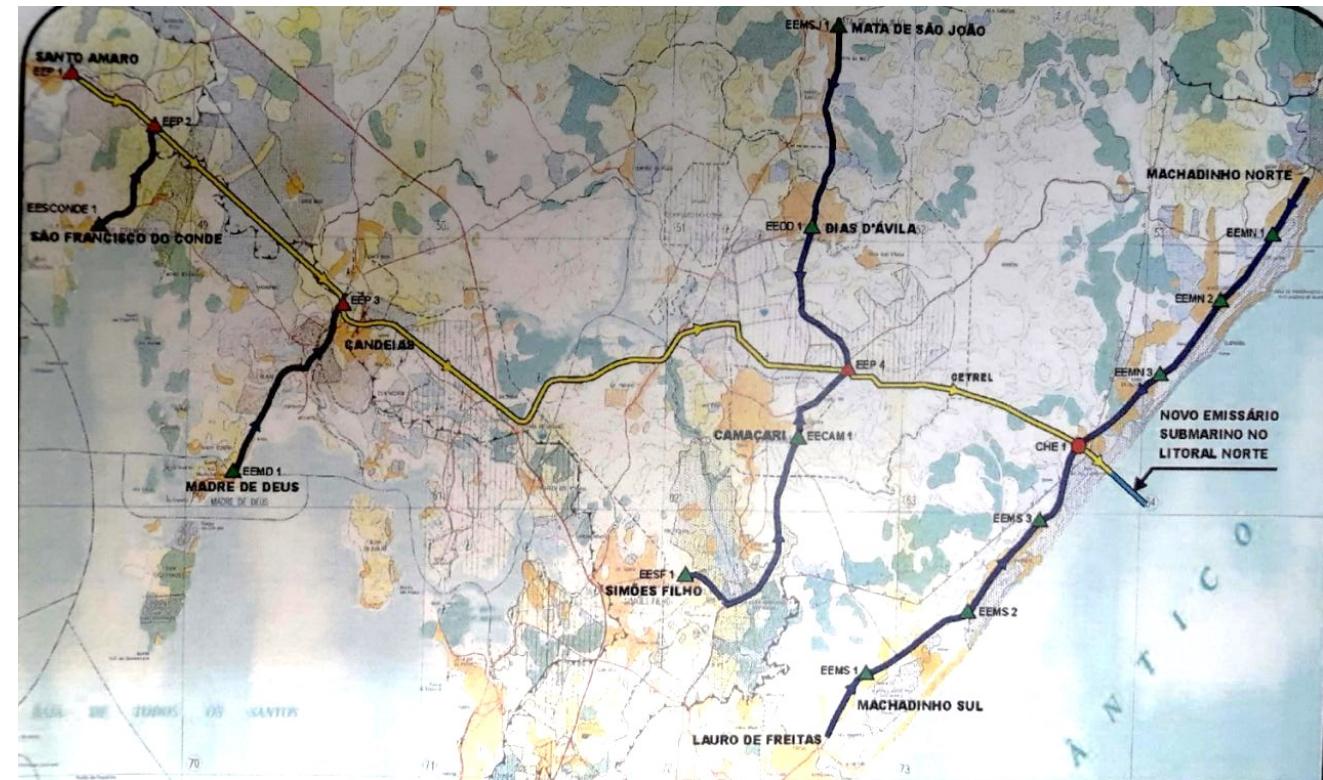


# NORTH COAST SUBMARINE OUTFALL (AREMBEPE)

## SES REGION NORTH OF SALVADOR

Municipalities served: Dias D'Ávila, Camaçari, Simões Filho and 35% of Lauro de Freitas

- Use of existing structure (Cetrel pier), for construction of submarine emissary;
- Operation of the system only with Stations, dispensing with Treatment Stations (lower complexity));
- Estimated investment: US \$ 112 million





**RUI COSTA**  
Governador