



The rise of independent oil companies in Brazil

Warm-up OTC 2024: Brazil Beyond the Pre-Salt

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Brazil at a glance


Brazil plays a relevant role in the Global O&G Industry




The largest economy in **Latin America** 

9th
Largest economy in the world
(Austin Rating)

 **3rd** largest recipient of **Foreign Direct Investment** in 2022
(85 billion USD - OCDE)

 **9th**
Largest **Crude Oil and Condensate** producer
(BP Statistical Review 2022)

 **8th**
Largest **Oil Products Consumer**
(BP Statistical Review 2022)

 **4th** Largest **automotive fuel market** in the World
A domestic market of over **203** million inhabitants

Among the **10** largest crude oil exporters in the world

9th
Largest **Refinery Capacity**
(BP Statistical Review 2022)
But still need to import diesel, gasoline, jet fuel and LPG

 **8^h**
In sales of **petrochemicals** worldwide
(Statista - 2022)

About ANP

ANP is the
Brazilian oil,
natural gas and
biofuels
regulator



ANP is an **independent regulatory agency**: board of 5 directors with fixed, staggered terms; mandatory RIAs, public hearings and consultations; administrative autonomy, etc. The government cannot overrule ANP technical decisions.



Regulate

Establish the regulation of the oil, natural gas and biofuels industry. ANP must assure **free competition, national supply, and consumers protection** in terms of price, quality and product offer.



Contract

Grant **authorizations** for the O&G and biofuels activities; to promote **E&P bidding rounds** and **sign contracts** on behalf of the Federal Estate.



Inspect

Enforce the standards and rules by the regulated industry. It covers the administrative process, judgment and sanction.

The opening of the O&G sector



E&P

Companies other than Petrobras are responsible for

35%

Of total O&G production (Feb/24)

Companies other than Petrobras operate¹...

66%

of the fields

85%

of the exploratory blocks

¹As of April/24



Downstream

Companies other than Petrobras are responsible for

20%

of the refining capacity (2023)

61%

of the fuels imports (gasoline + diesel - 2023)

100%

of the fuel distribution and retail



Gas

Companies other than Petrobras are responsible for

22%

Of total natural gas sales volume to distribution companies and final consumers – 2023)

3 of 5

Gas pipeline Operators without Petrobras participation

100%

Gas Distributors

Brazil is taking a leading role in the E&P sector



Nowadays

Production: **3.4** Million bpd of **oil** production (Feb 2024) **148** Million m³/d of **gas** production (Feb 2024)

Reserves: **15.9B** Bbl in proved **oil** reserves (Dec 2023) **517B** m³ in proved **gas** reserves (Dec 2023)

 **90B** USD **investments** forecast (2023-2027)

Forecast

 **2025**

Potential to reach a production of more than

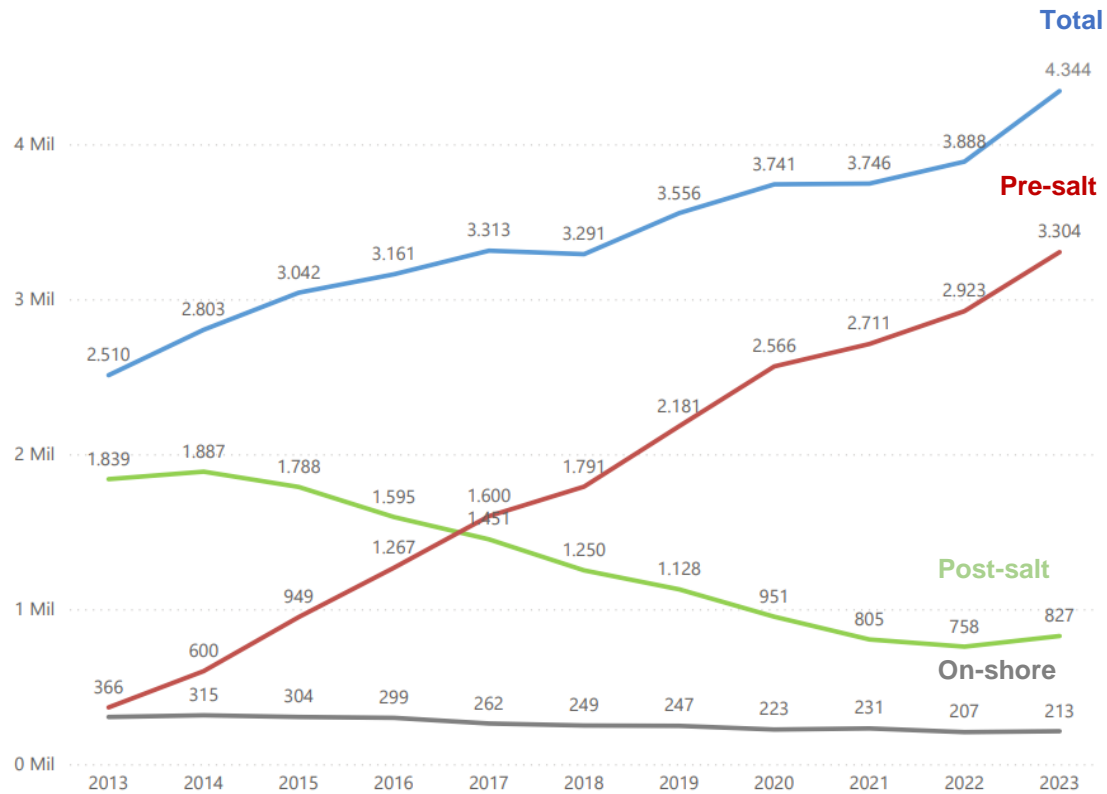
4 Million bpd of **oil**

195 Million m³ of **gas**

Three different E&P environment

Pre-salt production will continue to increase

O&G offshore production in Brazil (boe/d)



Pre-salt

Home to the largest offshore oil discoveries in the last decade. Poised to keep growing.

76%
of total O&G production

148 wells in production



Post-Salt Offshore

All the offshore area besides the pre-salt region, including new frontier areas and a significant number of large mature fields

20%
of total O&G production

385 wells in production



Onshore

Mature fields and New Frontier Basins (mostly gas prone)

5%
of total O&G production

5,972 wells in production

E&P strategic goals



**RIGHT ASSETS IN
THE RIGHT HANDS**



**INCREASE RECOVERY
FACTOR**



**INCREASE
EXPLORATORY
ACTIVITIES**



**MAKE MARGINAL
DISCOVERIES VIABLE**


We need to keep increasing **above ground competitiveness** in order to achieve our main goals

What have we already done and what is in the pipeline


DONE, among other measures:



Petrobras divestment plan




Free seismic and well data



Royalties reduction

*Over incremental production, for small and medium companies, and for new mature and new frontier basins contracts



Local content reduction and flexibilization


IN THE PIPELINE



Minimum exploratory program flexibilization

Work programs committed by companies in the bidding rounds for specific blocks may be carried out in other blocks

Regulatory impact analysis is done. A draft regulation is underway to be subject to public consultation



Fixed signing bonuses for onshore blocks

With few exceptions, onshore exploratory blocks may have a fixed minimum signing bonus from next open acreage cycle



E&P contracts extension

More than 100 requests already granted

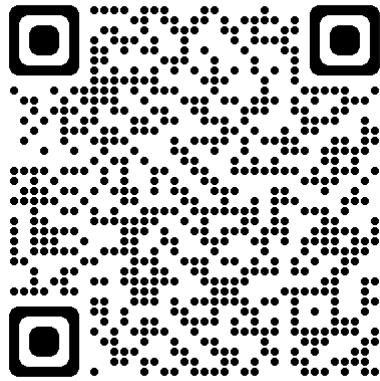
Further incentives for marginal fields

ANP has already approved a definition of marginal fields

Free public seismic and well data

Available online

All onshore post-stack, well data, non-seismic data and geochemical data (registration is optional)



<https://reate.cprm.gov.br/anp/>

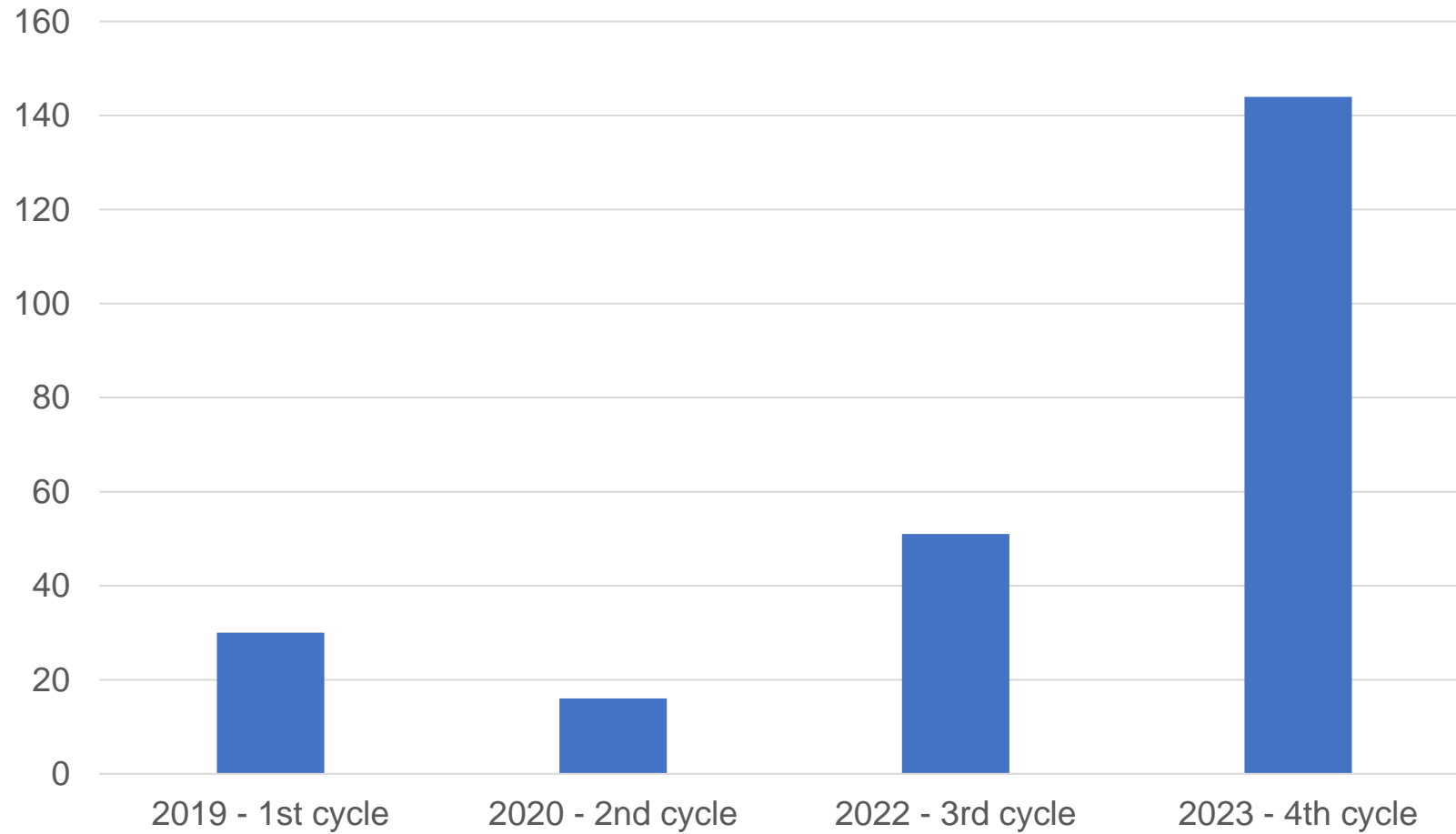


Available by request

All onshore pre-stack and select offshore pre-stack, post-stack and well data can be copied to a hard disk provided by companies that send a request to helpdesk@anp.gov.br

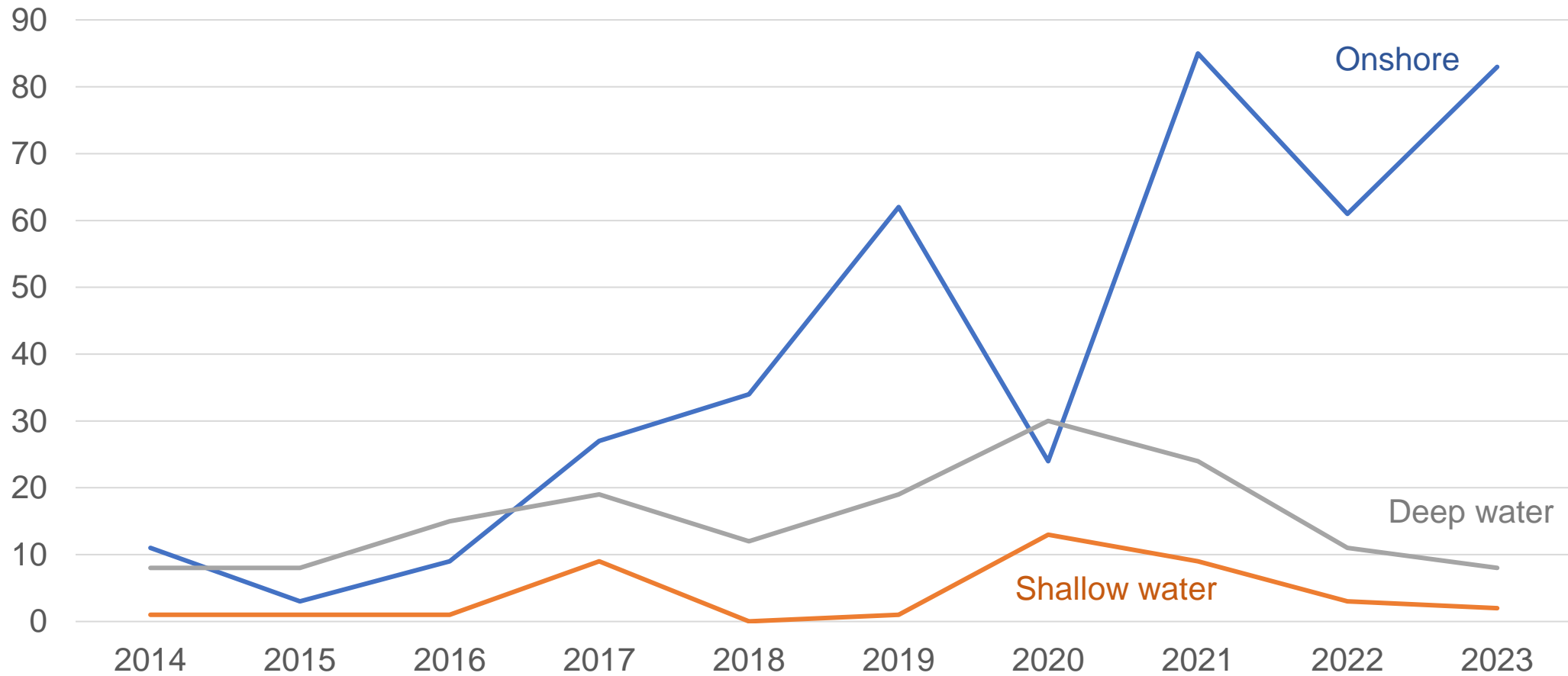
Interest in bidding rounds has grown

Onshore and **shallow water** exploratory blocks auctioned in bidding rounds



Number of farm-ins has increased

Farm-ins (including Petrobras divestment)

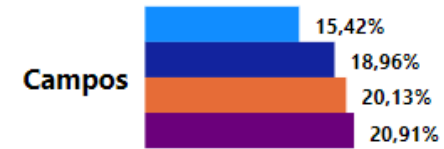


Investment is revamping mature offshore post-salt fields

Pargo, Vermelho e Carapeba: **380% of production growth** since farm-in (boe/d)

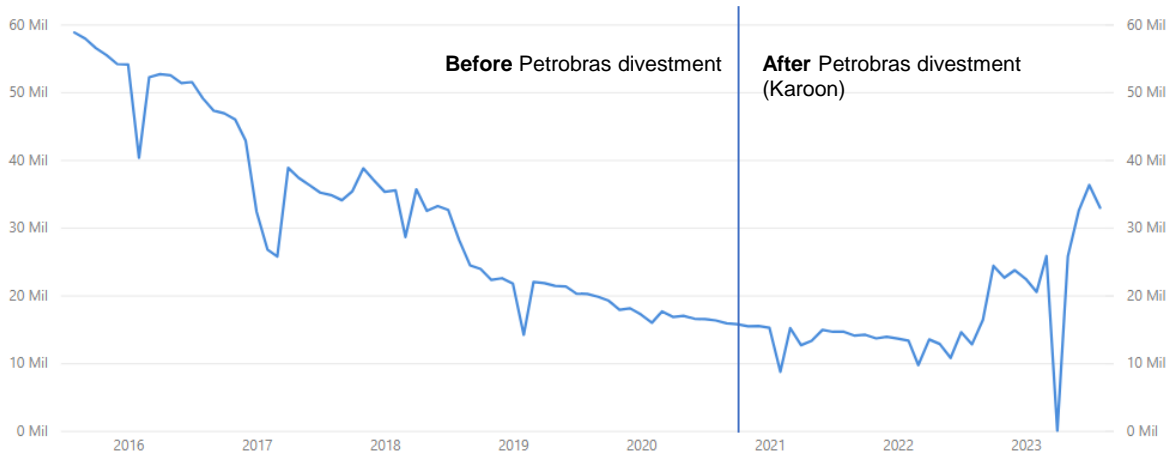


Opportunity to increase RF in Campos Basin

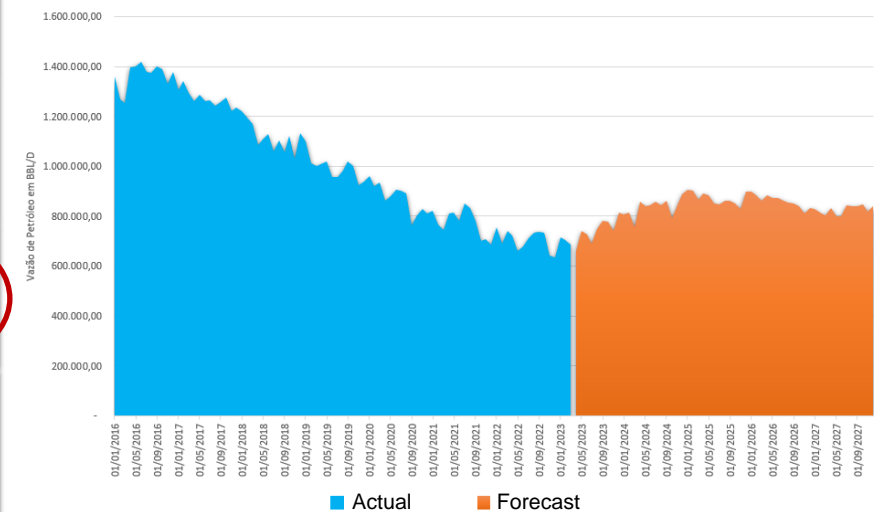


● Recovered so far ● RF forecast (1P) ● RF forecast (3P) ● FR previsto reservas 3P

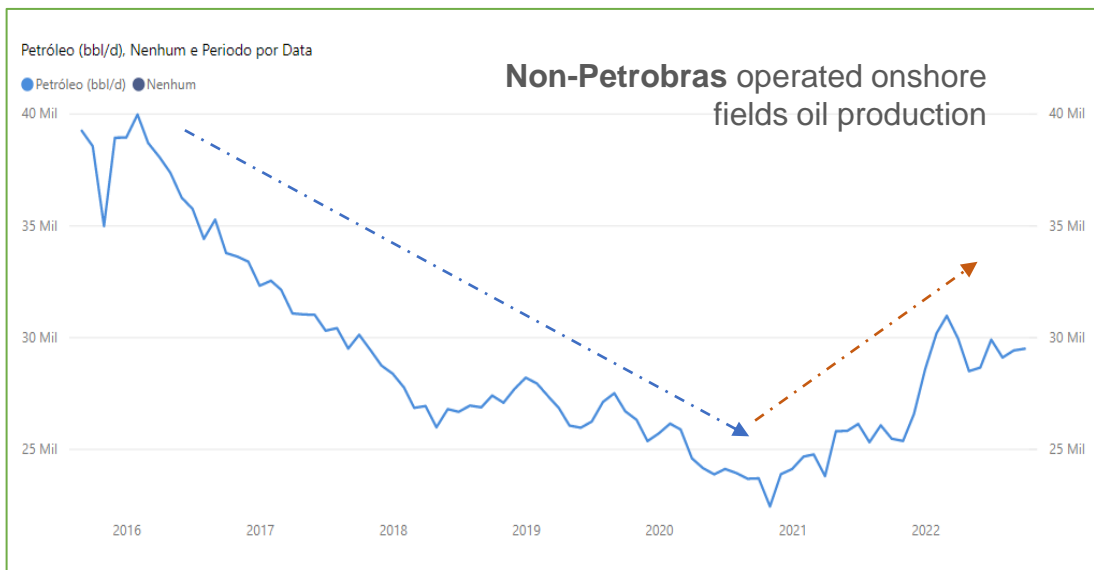
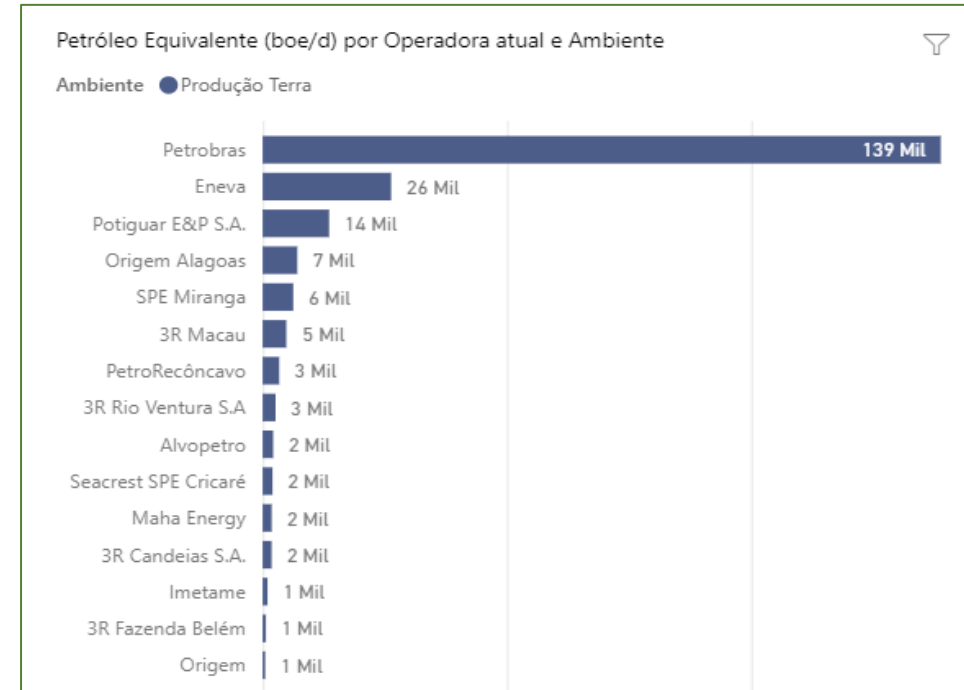
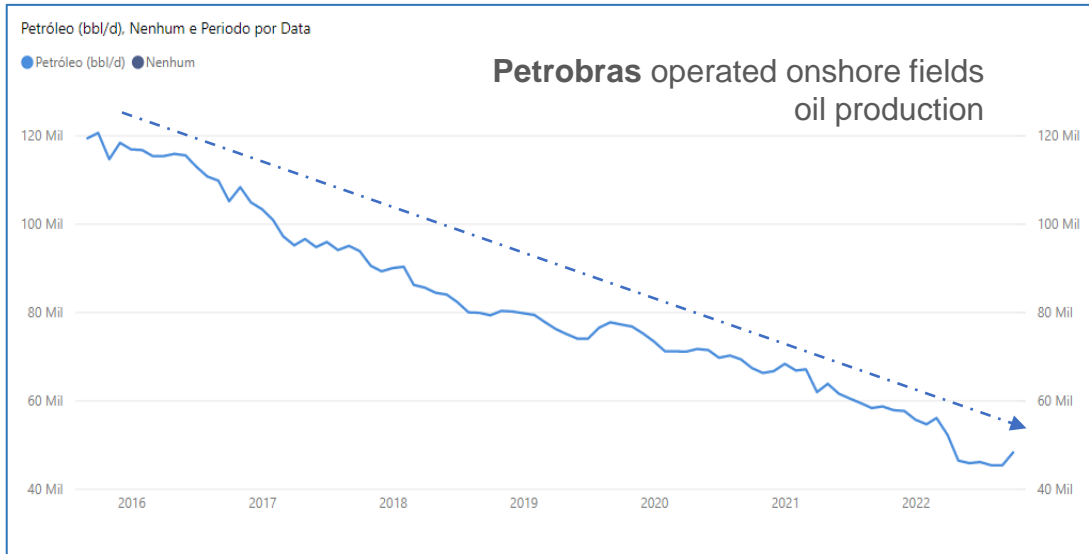
Baúna: **113% of production growth** since farm-in (boe/d)



Offshore mature fields production



And are also revamping onshore fields

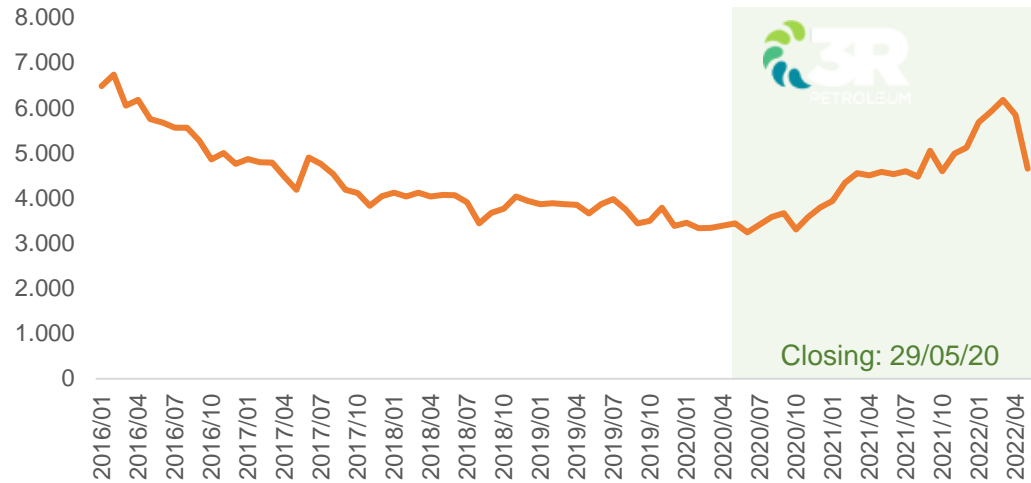


In 2021 and 2022, **non-Petrobras operators drilled 73 onshore wells**, whilst **Petrobras drilled 37 onshore wells**.

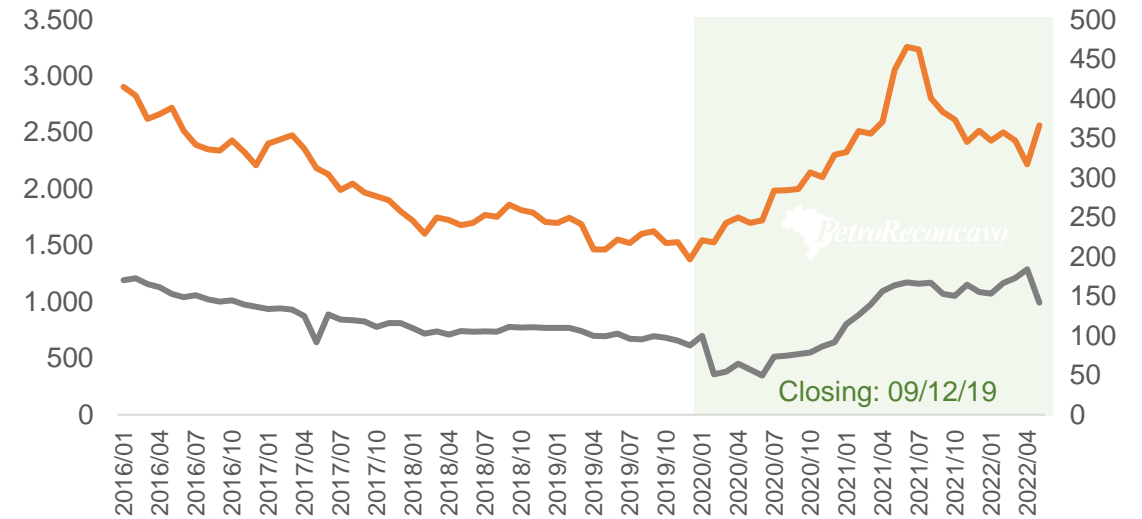


And are also revamping onshore fields

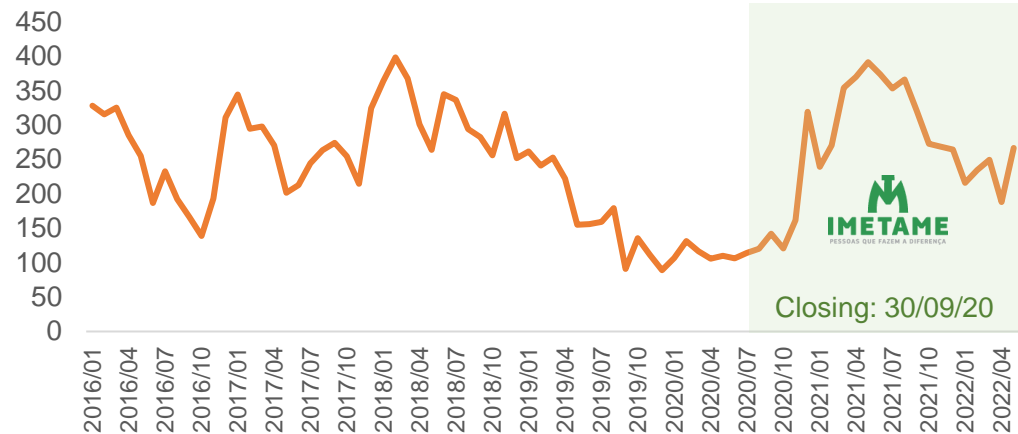
Macau e Salina Cristal (3R)



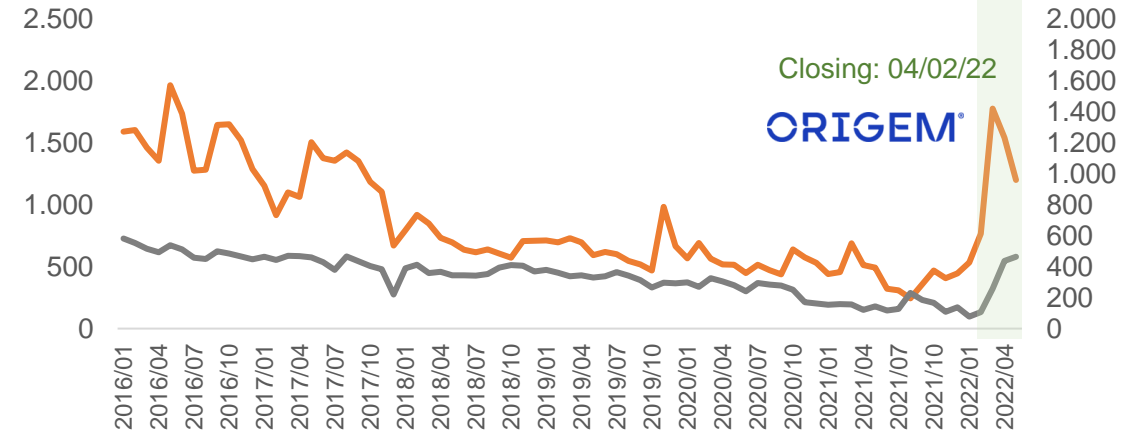
Lorena e Riacho da Forquilha (Potiguar E&P)



Lagoa Parda e Lagoa Piabanha (Imetame)



Pilar (Origem)

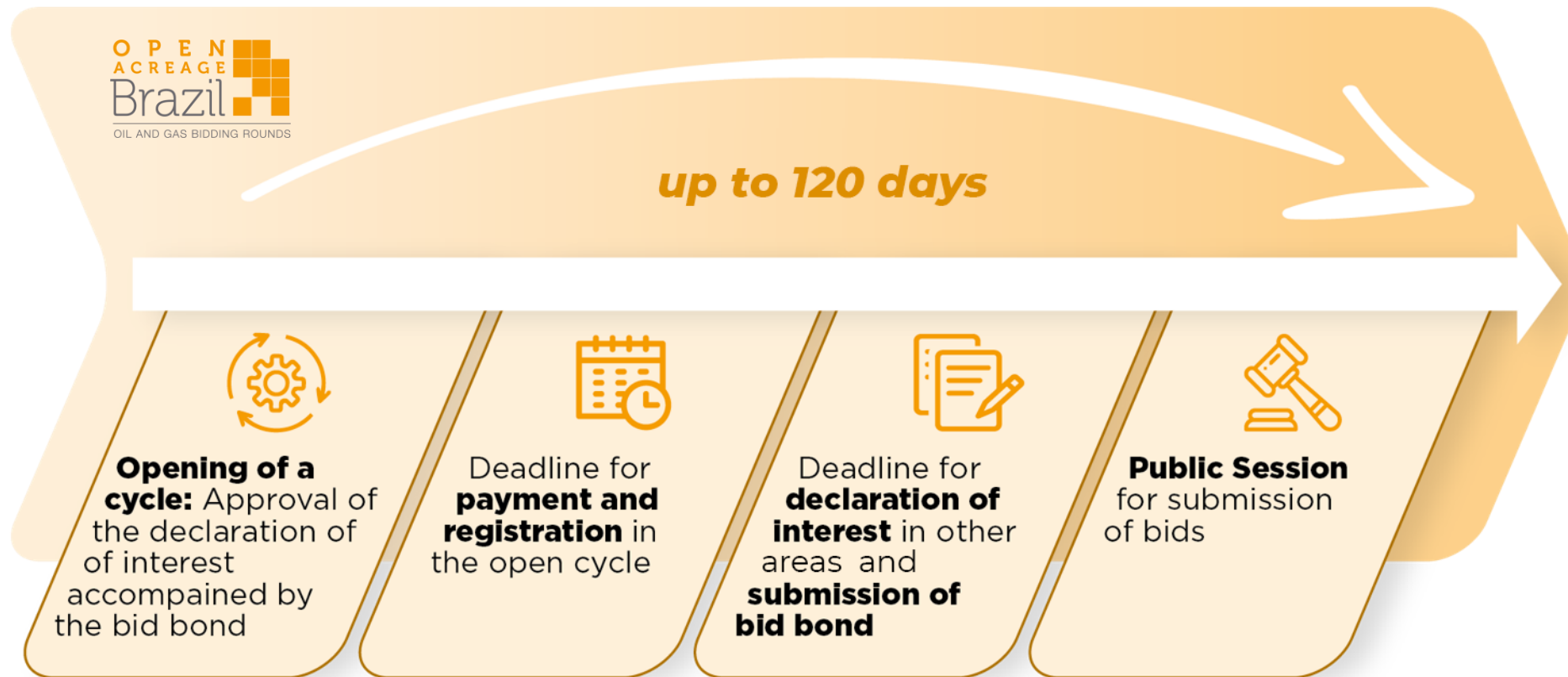


— Petróleo (bbl/dia)

— Petróleo (bbl/dia) — GN (Mm³/dia)

Opportunities in the Open Acreage

The Open Acreage allows the market to decide when bidding rounds will take place and what areas from the stock will be offered.



The schedules of the Open Acreage cycles will begin with the approval of a declaration of interest submitted by a registered bidder accompanied by a bid guarantee.

Tender protocol is currently under revision and a new version is expected to be published early next year

5th cycle of concession regime open acreage

Tender protocol for next cycle is expected to be published at the beginning of next year

Around
400
 Exploratory
 blocks

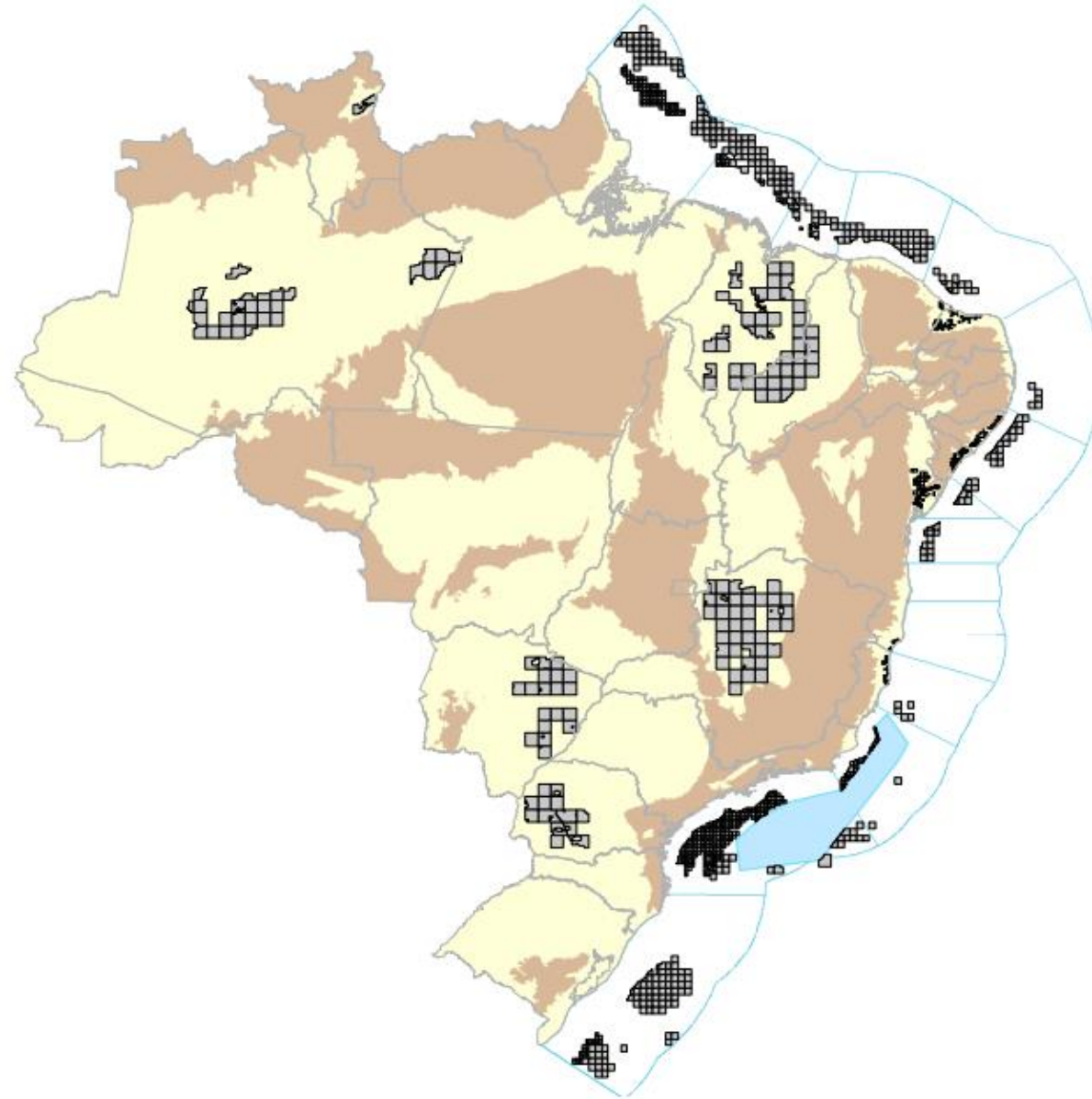
In
12
 Sedimentary
 basins



And more is to come to the concession regime open acreage

Any company can nominate new blocks to be studied under a fast-track scheme

Blocks
Under
**Study to
be added
in the
future**



1521

Exploratory
blocks under
study

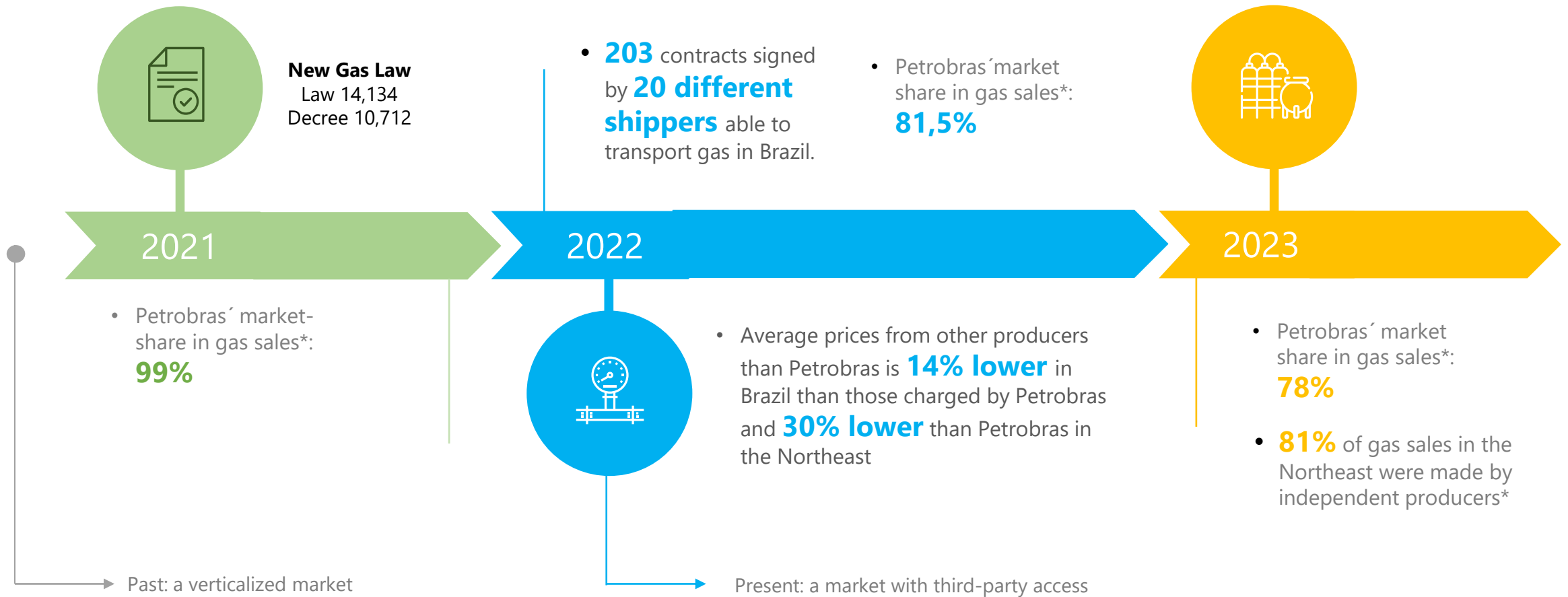
In

23

Sedimentary
basins

Brazil is also moving towards a competitive gas market

After new gas law, access to transport has been effective and enabled the entry of new suppliers in the commercialization market
 New transport contracts were signed between independent producers, natural gas distributors/free consumers and transporters



* Non-thermal Petrobras market share in the integrated gas pipeline system

Brazil in the energy transition

A country of plenty and diverse energy resources and one of the world's leading player in the energy transition

Brazil's electricity matrix is one of the cleanest in the world



 **49%**

Share of **primary energy from renewable sources, 2022**
World Average – 14% (MME)

 **4th**

Largest **share of primary energy from renewables**
1st – Iceland, 2nd Norway, 3rd Sweden (Our World in Data)

 **87%**

Share of **electricity production from renewables, 2022**
World Average – 28% (MME)

 **2nd**


Largest Producer and Consumer of **Biofuels**
(BP Statistical Review 2022)

 **2nd**

Largest **Hydropower** generation in 2022
(Our World in Data)

 **7th**

Largest **Wind Generation Capacity** in 2022
(Our World in Data)

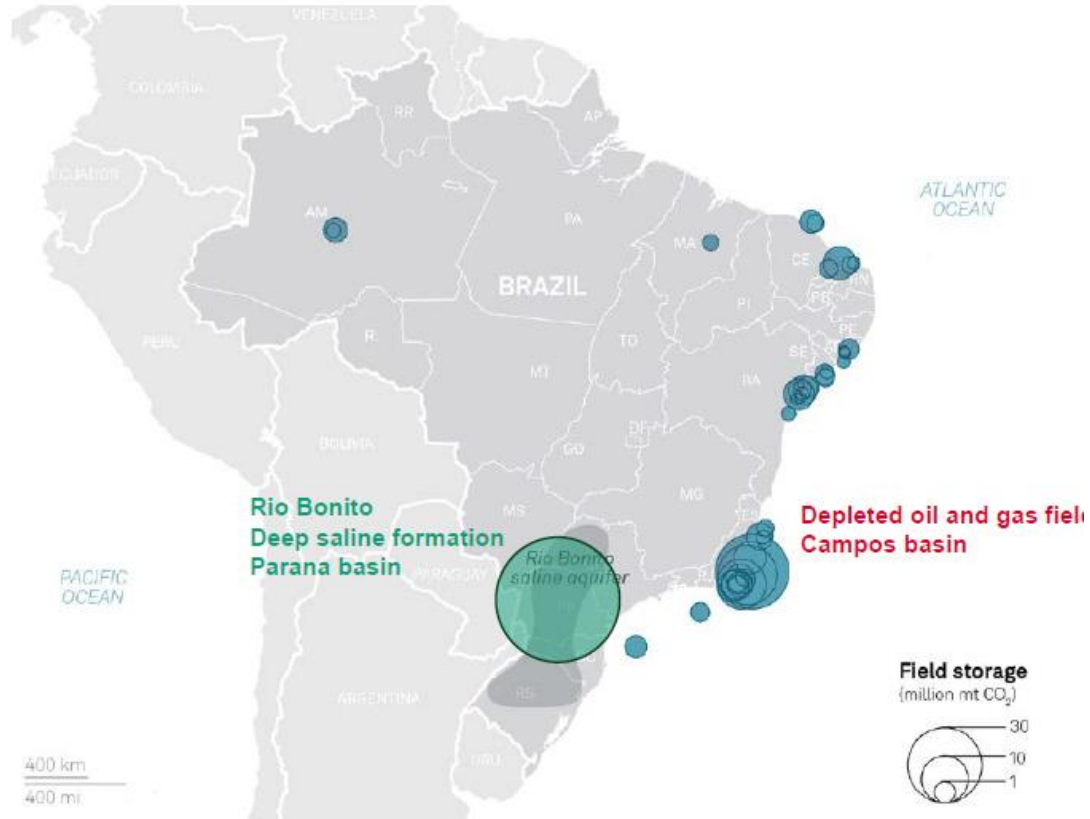
Less than **10** 
kgCO₂e/boe is the **carbon intensity in the pre-salt**

14 kgCO₂e/boe is the offshore average in Brazil

Compared to OGCI average – 19 kgCO₂e/boe

Brazil has huge potential for CCS

Brazil underground carbon storage potential



Source: S&P Global Commodity Insights

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S&P Global
Commodity Insights

1. High level of uncertainty exists on the capacity estimates in the deep saline aquifer in the Rio given the limited information available. Several other deep saline aquifers can offer similar storage were not quantified.
Source: S&P Global study developed for OGCI

according to S&P Global (2023)

Brazil has potential to store 2470 MtCO₂.
(i) saline aquifers and depleted O&G fields from **Campos Basin** and (ii) **onshore Paraná** are the main reservoirs currently under study.

BECCS and renewable energy to feed CCS
relevant opportunities that differentiates Brazil in the international scenario.

And also for hydrogen



ANP is taking part in the federal program for hydrogen



There is a taskforce for establishing a national strategy for hydrogen



A number of studies are being undertaken as Congress discusses a hydrogen bill. Legislative proposals have been recently presented by both chambers of Congress. The executive branch is also working on a related bill.

A country of great opportunities



Our Strengths

Sanctity of Contract

Geological potential

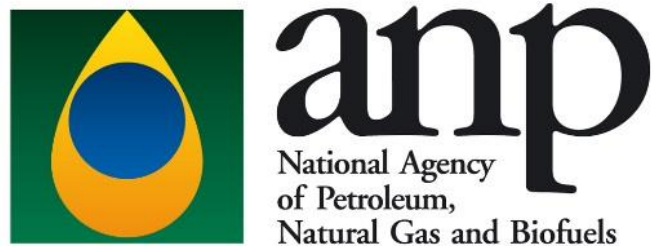
Incentives for independent operators

IOR opportunities in mature fields

Market opening in the midstream (New Gas Law) and downstream

One of the largest fuel market

Great potential for renewables and CCS

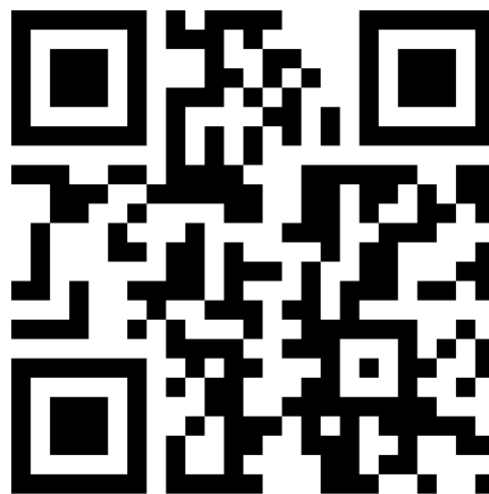


Official ANP profiles on
social media

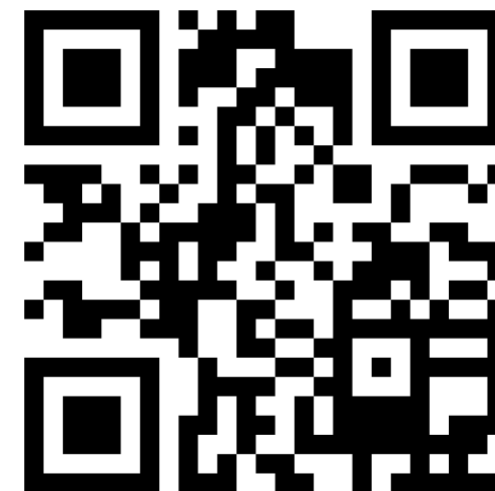


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