

2023

A year of records

4Q23 Performance
Webcast

March 8, 2024

Vivian Palmeira



Disclaimer

The presentation may contain forward-looking statements about future events that are not based on historical facts and are not assurances of future results. Such forward-looking statements merely reflect the Company's current views and estimates of future economic circumstances, industry conditions, company performance and financial results. Such terms as "anticipate", "believe", "expect", "forecast", "intend", "plan", "project", "seek", "should", along with similar or analogous expressions, are used to identify such forward-looking statements. Readers are cautioned that these statements are only projections and may differ materially from actual future results or events. Readers are referred to the documents filed by the Company with the SEC, specifically the Company's most recent Annual Report on Form 20-F, which identify important risk factors that could cause actual results to differ from those contained in the forward-looking statements, including, among other things, risks relating to general economic and business conditions, including crude oil and other commodity prices, refining margins and prevailing exchange rates, uncertainties inherent in making estimates of our oil and gas reserves including recently discovered oil and gas reserves,

international and Brazilian political, economic and social developments, receipt of governmental approvals and licenses and our ability to obtain financing.

We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information or future events or for any other reason. Figures for 4Q23 on are estimates or targets.

All forward-looking statements are expressly qualified in their entirety by this cautionary statement, and you should not place reliance on any forward-looking statement contained in this presentation.

In addition, this presentation also contains certain financial measures that are not recognized under Brazilian GAAP or IFRS. These measures do not have standardized meanings and may not be comparable to similarly-titled measures provided by other companies. We are providing these measures because we use them as a measure of company performance; they should not be considered in isolation or as a substitute for other financial measures that have been disclosed in accordance with Brazilian GAAP or IFRS.

NON-SEC COMPLIANT OIL AND GAS RESERVES: CAUTIONARY STATEMENT FOR US INVESTORS

We present certain data in this presentation, such as oil and gas resources, that we are not permitted to present in documents filed with the United States Securities and Exchange Commission (SEC) under new Subpart 1200 to Regulation S-K because such terms do not qualify as proved, probable or possible reserves under Rule 4-10(a) of Regulation S-X.



Thaís Pessanha

Corporate Highlights

Clarice Coppetti
Chief Corporate Affairs Office

Corporate Affairs Highlights



We took on 2,296 new employees in the Public Selection Processes, and completed the training of 1,194 employees in our Training Courses.



Creation of the Diversity, Equity and Inclusion Department, with targets approved in PE 24-28+, increasing the percentage of women to 25% and the percentage of black people in leadership positions to 25% by 2030. In addition, we have the goal of doubling the number of people with disabilities in the workforce by 2030, with the ambition of reaching 5%, and 25% of women entering public selection processes by 2030.



Launch of the Diversity, Equity and Inclusion Policy, which provides for the fight against discrimination and harassment and the adoption of affirmative actions to eliminate and remedy the effects of discrimination against under-represented groups.



We signed Terms of Cooperation with a Diversity Clause – the first Terms of Technological Cooperation to include Diversity clauses. They establish that the team carrying out research projects in the areas of Science, Technology, Engineering and Mathematics must have at least 40% women, black people, indigenous people, quilombola and people with disabilities.



We won the Think Work Flash Innovations award in the Employee Experience category and the "Gold Excellence Certification" in the 2023 National Quality of Life Awards.

Corporate Affairs Highlights



Start-up of the Gaia, Gemini, Albacora and Cazarin supercomputers, designed to minimize energy consumption (energy eco-efficiency) and reduce the processing time of our oil and gas reservoir simulations, with potentially significant productivity gains.



We carry out training in "Human Rights in ISC: a look at caring for people", for the work of security professionals, Integrity and Corporate Security - ISC, with a focus on Human Rights.



Regionalization - In order to take advantage of regional potential, we reopened the Pituba Tower (Salvador/BA) and took over the building management of EDIRN (Natal/RN).



Artificial Intelligence – AI, we deployed ChatPetrobras generative text AI models available as an API - Application Programming Interface - through the Petrobras AI Models Hub.



Adriane
de Lima

Actions aimed at women in the workforce



- **We designed and implemented the Petrobras Program Against Sexual Violence**, which centralizes and monitors the implementation of actions to combat harassment, bullying and sexual violence.
- **We set Diversity, Equity and Inclusion Goals**
- **We joined the Brazil without Misogyny Initiative**
- **We implement Women's Mentoring Programs**
- **We have increased the number of Breastfeeding Rooms**
- **We have included a Diversity Clause in our Terms of Cooperation**



WELCOMING CHANNEL - *For people affected by violence at work*

Actions aimed at active listening and favoring the protagonism of the person seeking care, strengthening their decision-making and promoting comprehensive health care.

- 24 hours | 7 days a week
- Attendance by health professionals
- Secrecy and confidentiality
- Available to the entire workforce
- Victim | Whistleblower | Co-workers | Leadership | Reported

Commitment to Life Program

Water safety studies and optimization of water use in refineries

Conclusion of the circular economy study for new oil sludge recovery routes

+ 36 units with biodiversity action plans

+3,000 outreach actions implemented based on HSE lessons learned

+700,000 hours of HSE training carried out by 2023



+ 32 operational units with Dynamic Management of process safety barriers implemented

+ 60,000 members of the workforce underwent Human Factors training.

Environmental emergency drill successfully carried out on the equatorial margin

+6,000 leaders trained in Mental Health

3,000 registered for the Petrobras Running and Walking Circuit in the RJ stage

E Environmental **S** Social **G** Governance

Social Responsibility



Signing of the Technical Cooperation Agreement with the Ministry of Human Rights and Citizenship *with the aim of promoting the **improvement of public policies and corporate governance practices** in relation to Human Rights.*



Launch of our Racial Equity Program *with the aim of positioning the company as a **reference in the promotion of racial equity in the Brazilian corporate environment**, as well as contributing to the achievement of the PE 2024-2028+ objectives and to the strengthening of Brazilian public policies.*



Launch of the Second Stage of the 2023 Public Selection for the Petrobras Socio-Environmental Program *The two stages total **R\$432 million to be invested** in around **60 projects** over the three years.*



Updating our Social Responsibility Policy *which establishes guidelines for the company's actions on ESG, in line with the PE 2024-2028+.*



Recognition of our Sustainability Report as one of the top ten for 2023 *according to the Reporting Matters methodology, evaluated in Brazil by CEBDS - Brazilian Business Council for Sustainable Development.*



Financial Highlights

Sergio Leite
Chief Financial and Investor Relations Officer

Fernanda Freitas
e Milena Frej

Our appreciation in the market is reflected in shareholder remuneration and the return to society



RECORD MARKET AND SHARE VALUES

+ R\$ 150 billion
growing throughout 2023



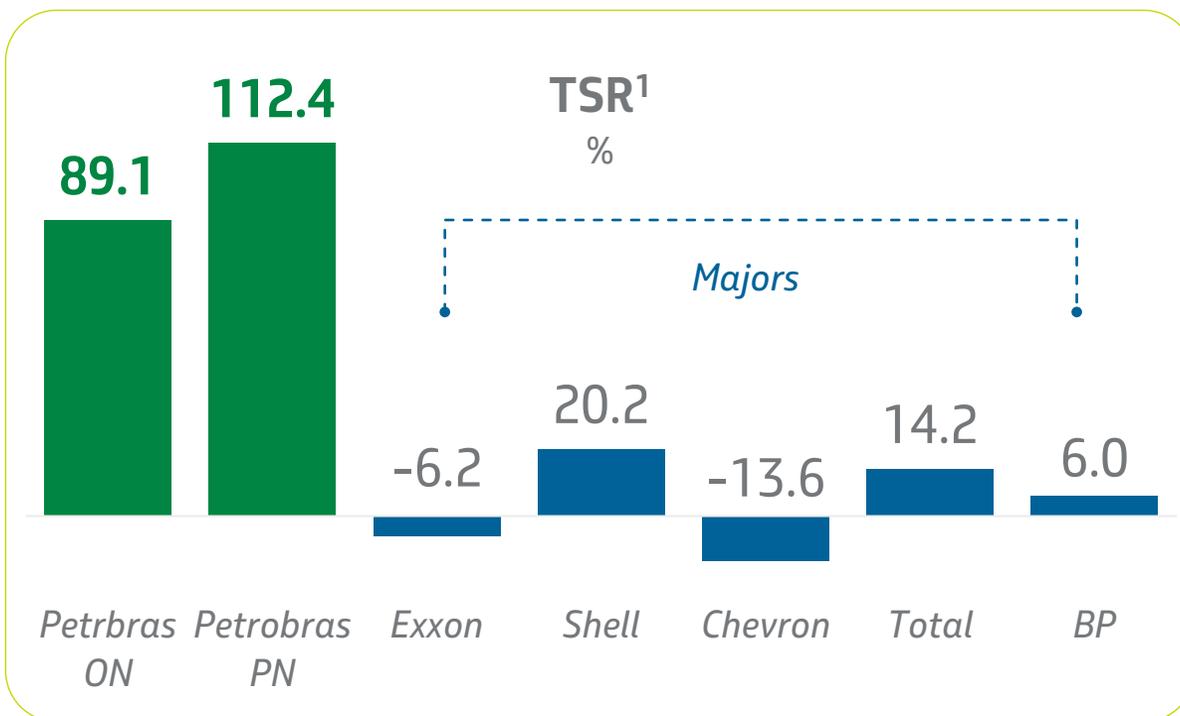
REMUNERATION TO SHAREHOLDERS

US\$ 20.4 billion
we paid out US\$ 19.7 billion in dividends and US\$ 0.7 billion in share buybacks



RETURN TO SOCIETY

R\$ 240 billion in taxes
R\$ 36.6 billion in dividends
R\$ 54 billion in asset appreciation²



¹The total shareholder return shows the total return on shares traded in the US in 2023, considering the reinvestment of dividends paid at the spot price

² Corresponds to the change in the market value of the controlling group's stake

In 2023 we achieved significant financial results



Adjusted EBITDA

**US\$ 52.4
billion**

**second largest in
history**



OCF¹

**US\$ 43.2
billion**

**second largest in
history**

FCF²

**US\$ 31.1
billion**

**third largest in
history**



NET INCOME

**US\$ 24.9
billion**

**second largest in
history**



GROSS DEBT

**US\$ 62.6
billion**

*within the SP 2024-28
reference range*

FINANCIAL DEBT

**US\$ 28.8
billion**

**reduction of US\$ 1.2
billion**

¹ FCO = Operational Cash Flow

² FCL = Free Cash Flow

And we got recognition for our efforts



ROCE¹

11.2%



AWARDS

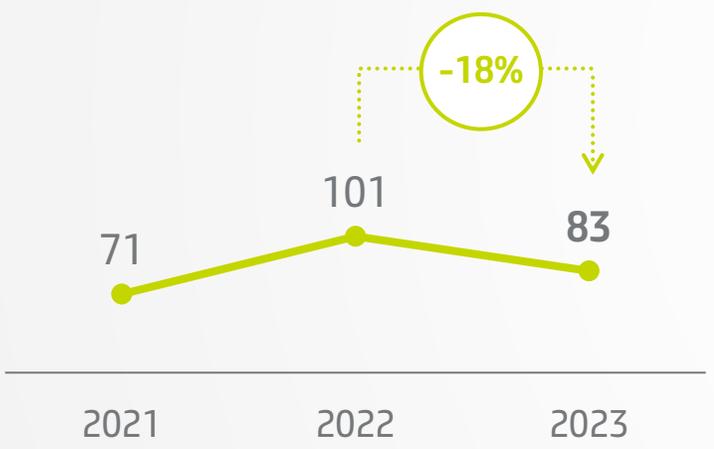
- **Quasi Sovereign Bond Deal of the Year Award** by issuing US\$1.25 billion in ten-year bonds
- **“Transparency Movement” Award**, promoted by the UN Global Compact
- **Transparency Trophy**, awarded by ANEFAC - for the seventh consecutive year

¹ROCE = Return on Capital Employed

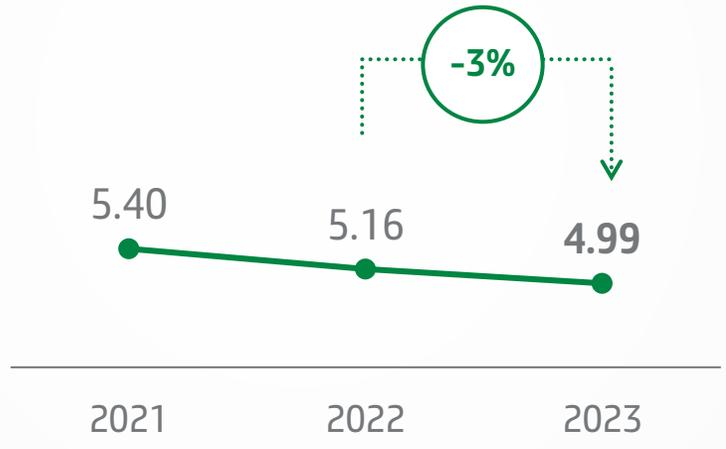


There was a significant change in the external environment in 2023

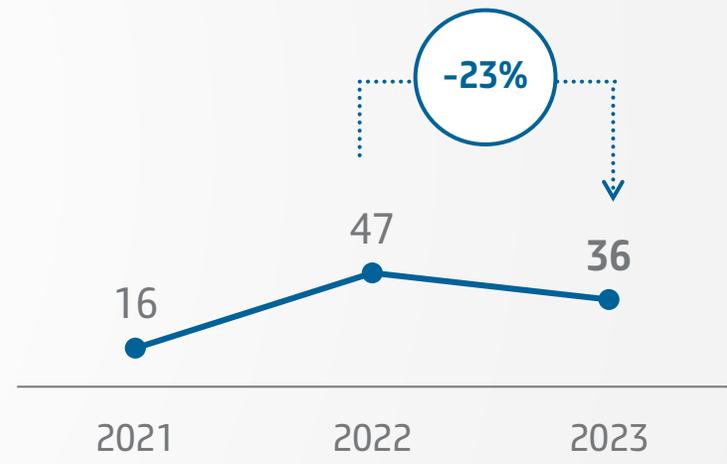
*BRENT
US\$/bbl*



*EXCHANGE RATE
R\$/US\$ - Average exchange rate*



*CRACKSPREAD DIESEL
US\$/bbl*

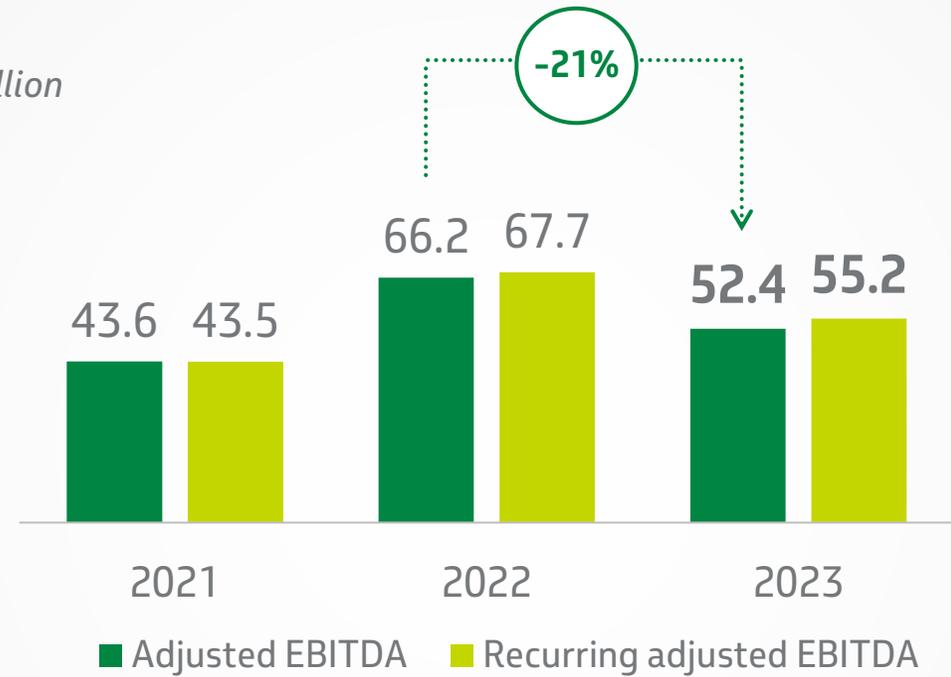




Lilian Rabelo

which impacted EBITDA

US\$ billion



BRENT
(US\$/bbl)

71

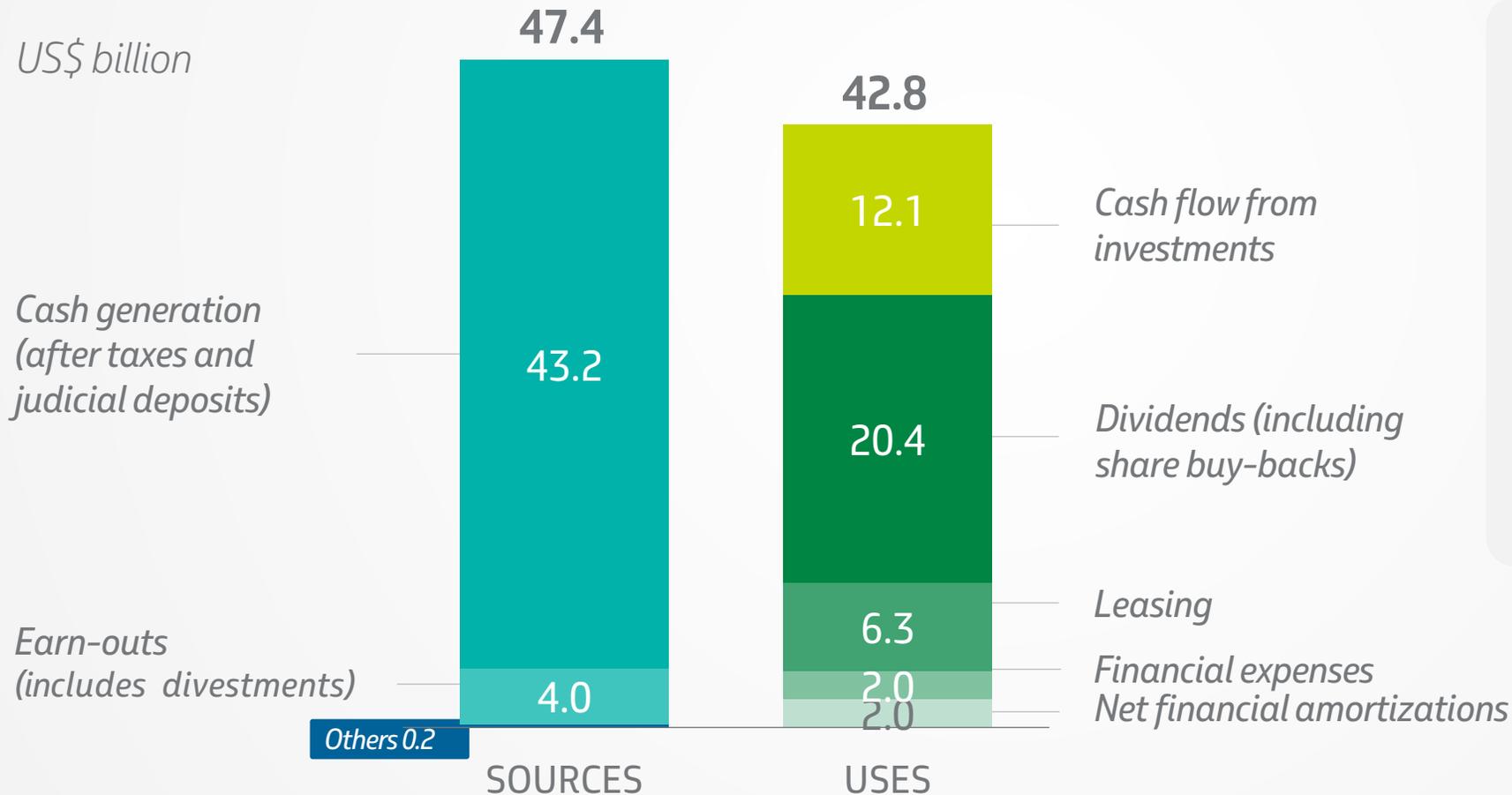
101

83

The reduction in adjusted EBITDA reflects the devaluation of Brent and lower oil products margins, partly offset by the higher volume of oil exported.

Even in this challenging scenario, we generated the 2nd largest OCF in history and still increased cash by US\$ 4.7 billion

We generated an FCF of US\$ 31.1 billion, the 3rd highest in history



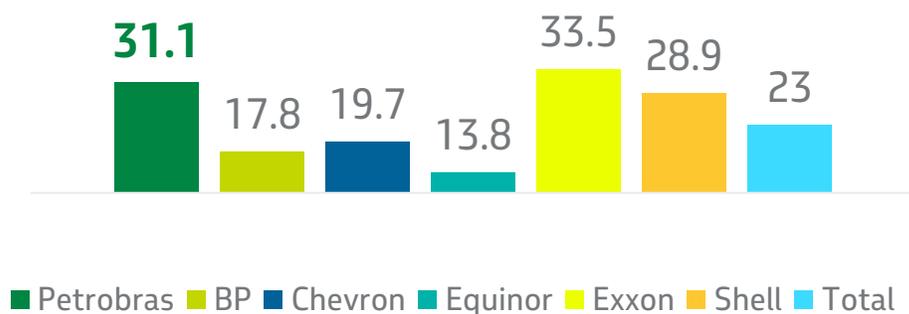
Values in 2023

Brent
US\$/barril
82.62

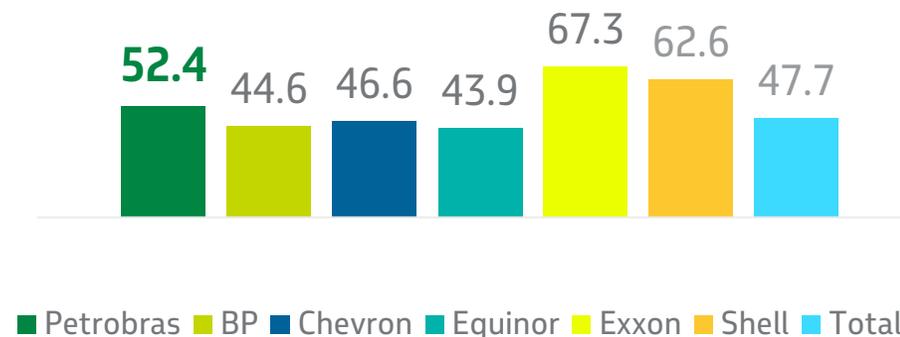
Average selling dollar
R\$/US\$
4.99

We had more success in dealing with a more challenging scenario

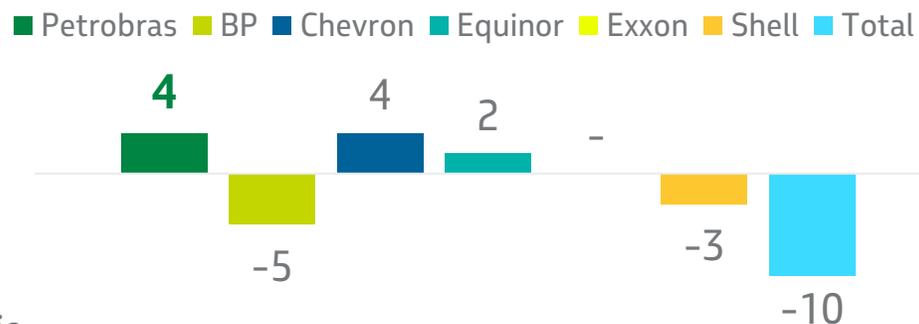
FREE CASH FLOW (US\$ billion)



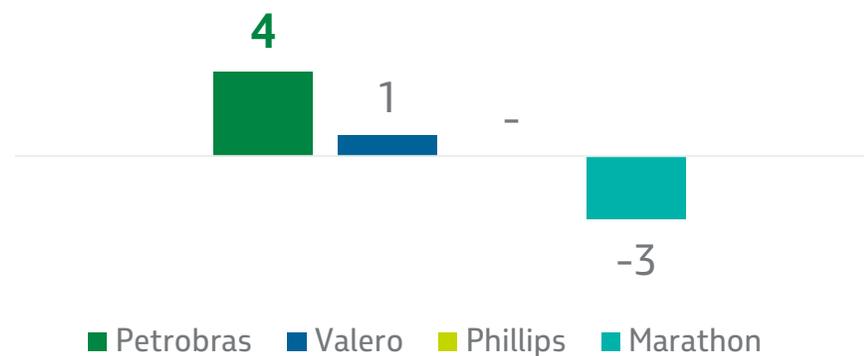
EBITDA (US\$ billion)



Δ OIL AND GAS PRODUCTION (%)



Δ CAPACITY UTILIZATION (p.p.)



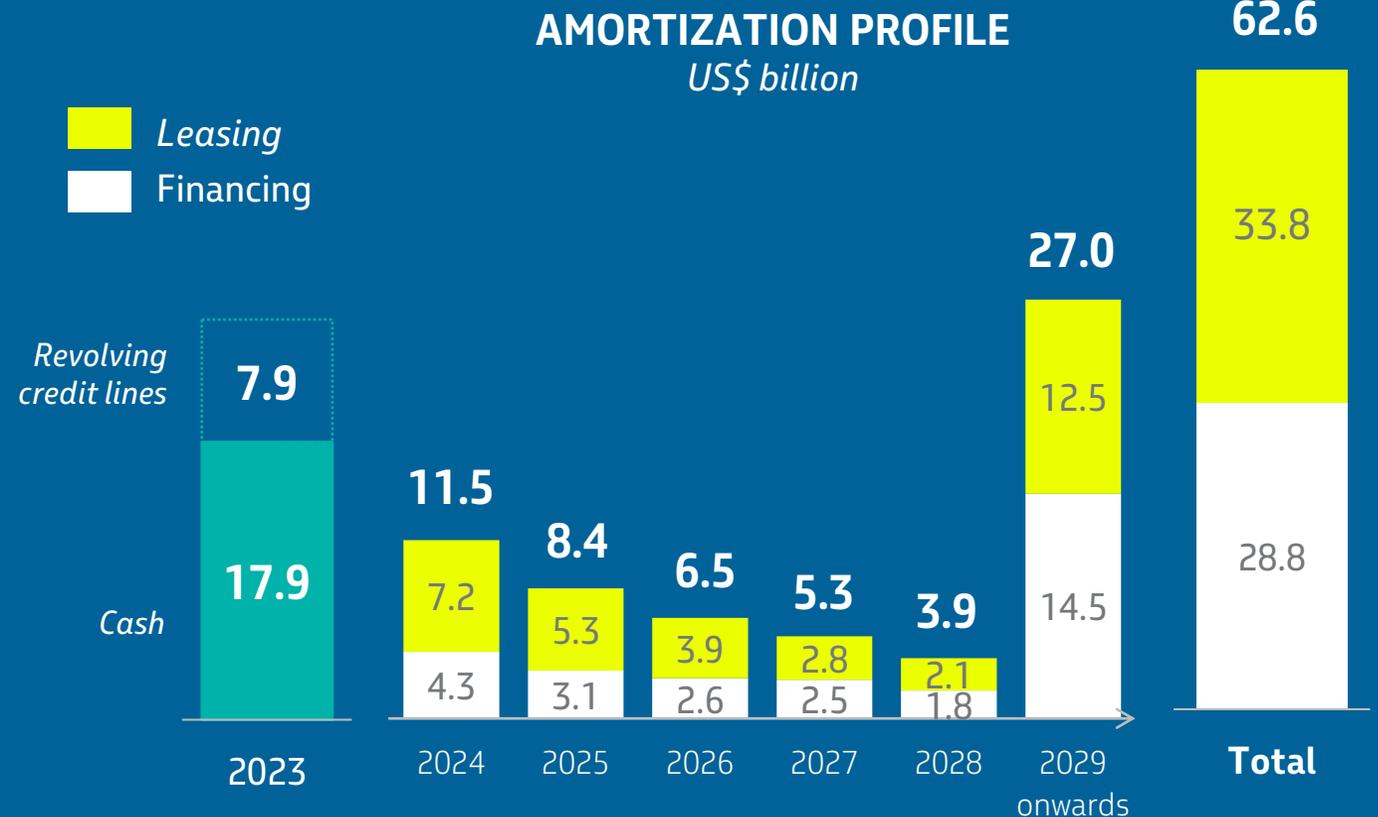
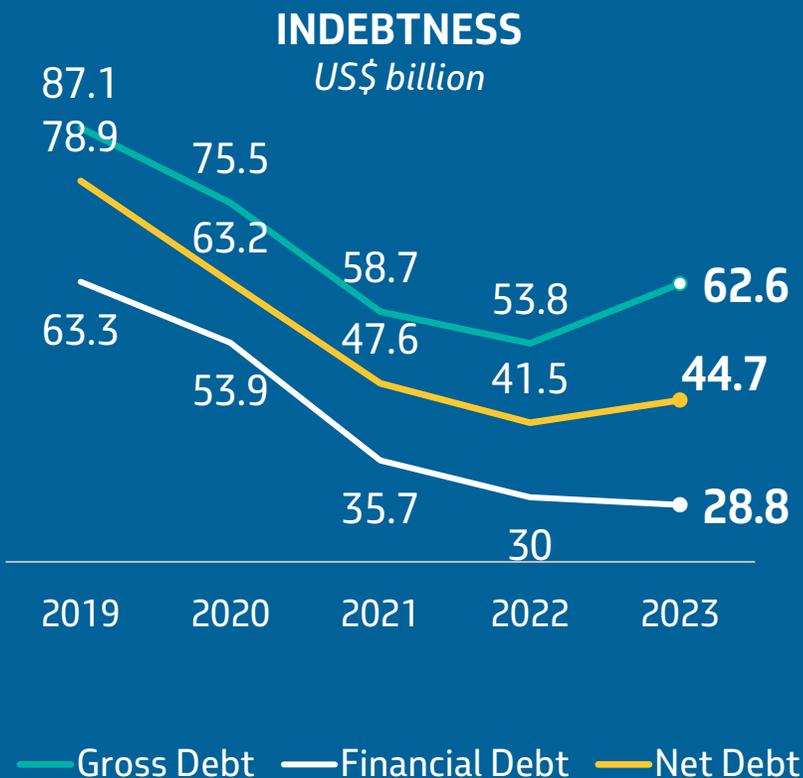
Organic RRI¹ %

168 47 9 104 45 99 0

¹ Reserve replacement index

We reduced our financial debt by US\$ 1.2 billion

Gross debt remains within the range defined in the Strategic Plan even after the entry of 4 new chartered FPSOs



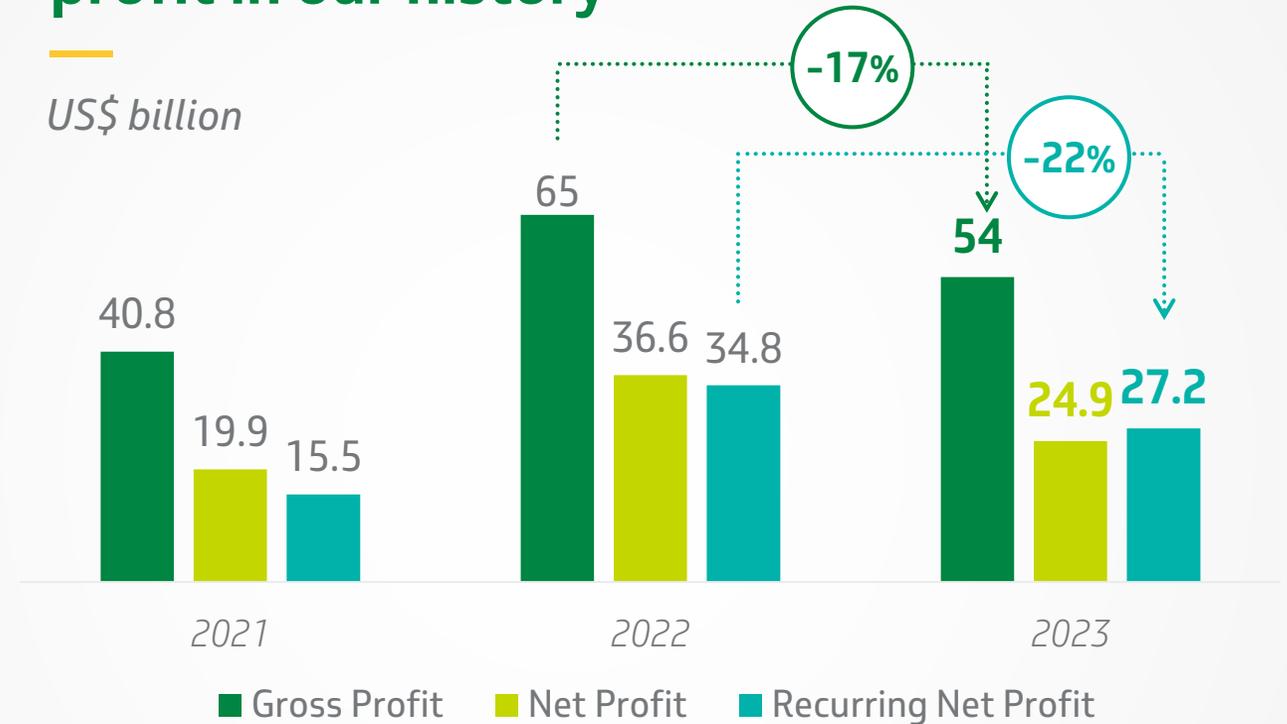
- Average debt maturity of 11.38 years
- Average Financial rate of 6.4% p.y



Driele Trindade

In 2023 we recorded the 2nd highest net profit in our history

US\$ billion

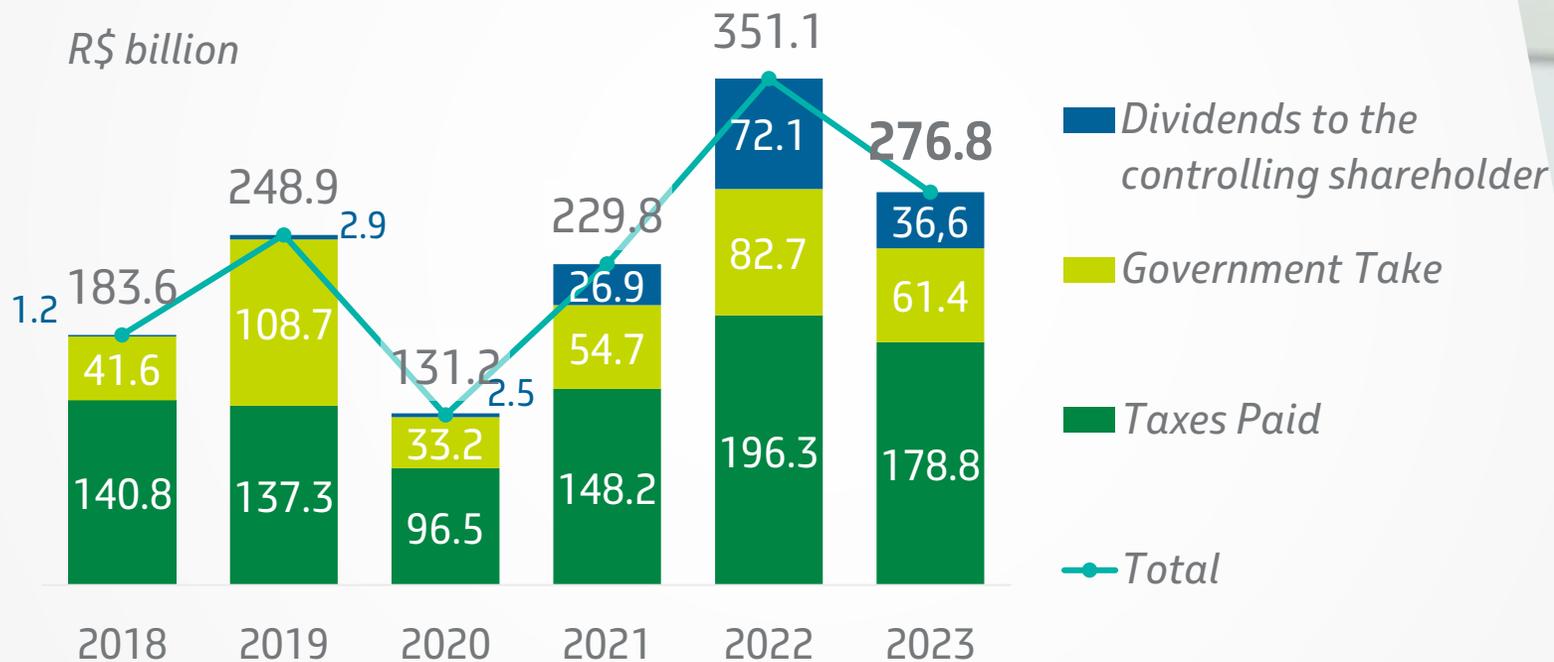


2023 x 2022

Net income was impacted by the devaluation of Brent (-18%) and lower margins on derivatives (diesel -23%), although this was partially offset by the increase in the volume of oil exported and the improvement in the financial result due to the gain from the exchange rate variation of the real against the dollar.

And we contribute to society with the payment of R\$ 276.8 billion in taxes and dividends

61%¹ of cash generation returned to society



¹ Dividends paid to the controlling group plus taxes and government participations paid to the Federal Government, States and Municipalities divided by operating cash generation + taxes and government participations paid.

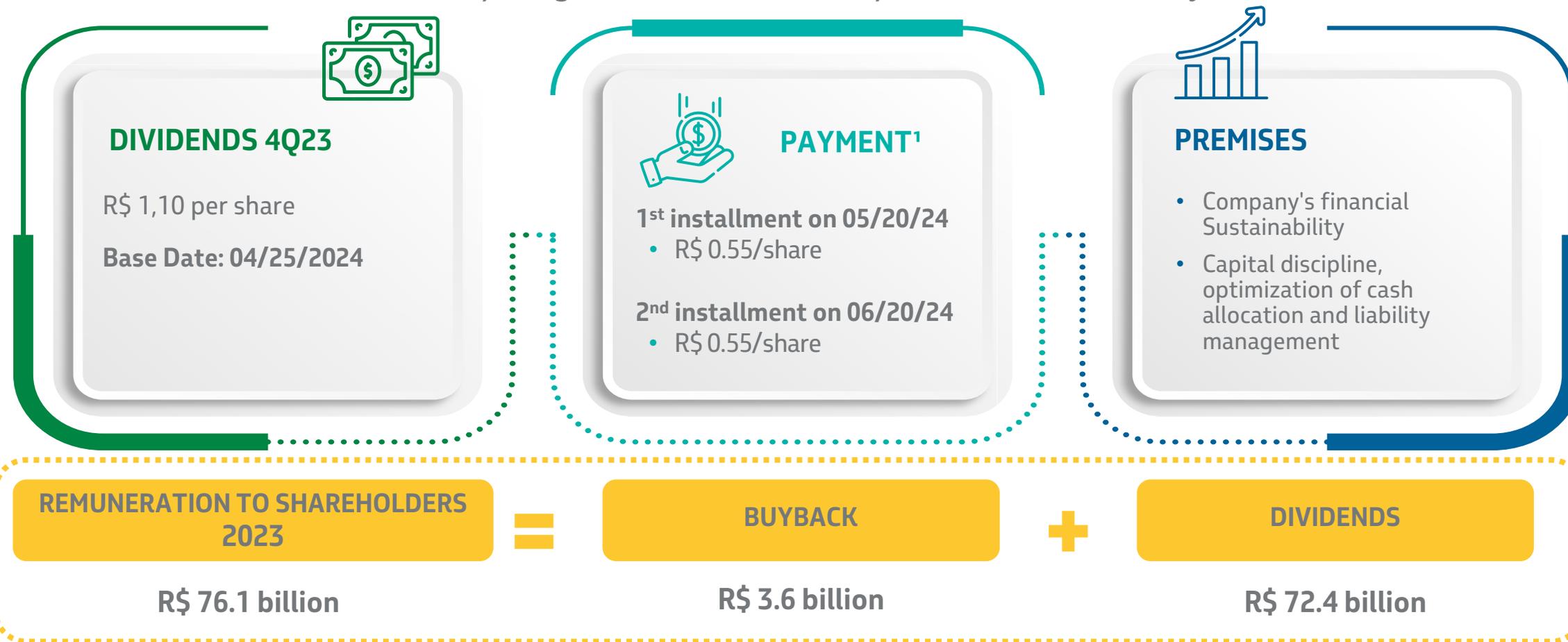
Note: amounts presented on a cash basis



Sueli Akemi

Remuneration to Shareholders 3Q23

Commitment to the distribution of the generated results and financial sustainability



Proposal: allocate remaining net profit to the **Capital Remuneration Reserve**

¹ The amounts of dividends per share are preliminary and may vary until the cut-off date as a result of the share buyback program. Amounts will be adjusted by the SELIC rate between 12/31/2023 and the date of actual payment.



Governance and Compliance Highlights

Mario Spinelli
Chief Governance and Compliance Officer

Claudete de Oliveira



Governance and compliance



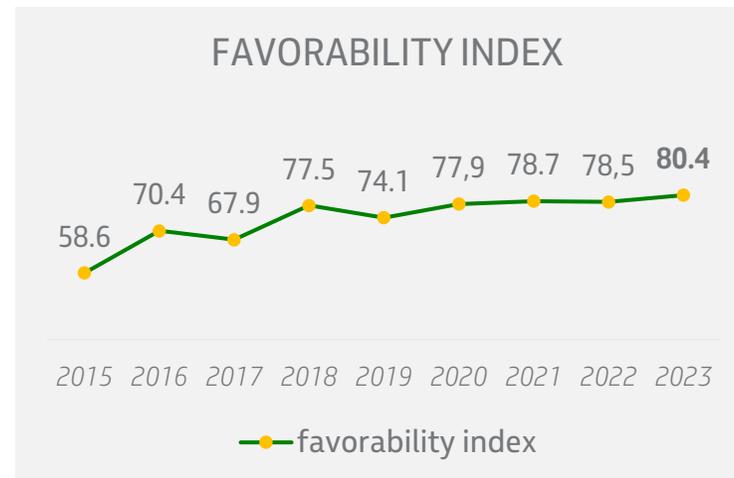
Strengthening the Governance and Compliance area

with the creation of the executive management of **Disciplinary Accountability**; general management of **Strategic Information and Monitoring of Integrity Systems** and management specialized in **investigating reports of violence at work.**



Compliance Survey 2023

The results of this edition indicated a favorability index (IF) for compliance actions of 80.4 for the holding company, compared to 78.5 in 2022, the highest in the historical series.



AWARDS, CERTIFICATIONS AND CONGRESSES

IX Competition for Best Practices in Ethics Management

Public Ethics Committee (PEC)

Rio Oil & Gas Expo and Conference 2024

IBP – Instituto Brasileiro de Petróleo

Recognition for Leaders in the Privacy Field

The Fellow of Information Privacy

100% Transparency Movement

Global Compact Network Brazil

Compliance On Top - Most Admired Professionals of 2023

VITTORE and LEC

Strengthening Corporate Governance



Board of Directors

responsible for approving global strategies - commercial, financial, risk, investment, transactions with related parties and others



Executive Board

responsible for managing the business and achieving results



Statement by the statutory committees

before the decisions of the Executive Officers, the Executive Board and the Board of Directors



Decision-making process

requires validation from technical areas and legal and compliance analysis



Independent structures

for Governance and Compliance, Internal Audit and Ombudsman

External reporting channel,

with guaranteed anonymity and protection against retaliation

Petrobras is supervised by various regulatory bodies

such as the CVM (Securities and Exchange Commission), the CGU (Office of the Comptroller General), the TCU (Federal Audit Court), the SEST (Secretariat for the Coordination and Governance of State-Owned Enterprises) and the CADE (Administrative Council for Economic Defense).

Processes looking for technical decisions

Preventing undue political interference

Projects with a financial return

Governance reinforces rational decision-making processes

POWER OF VETO

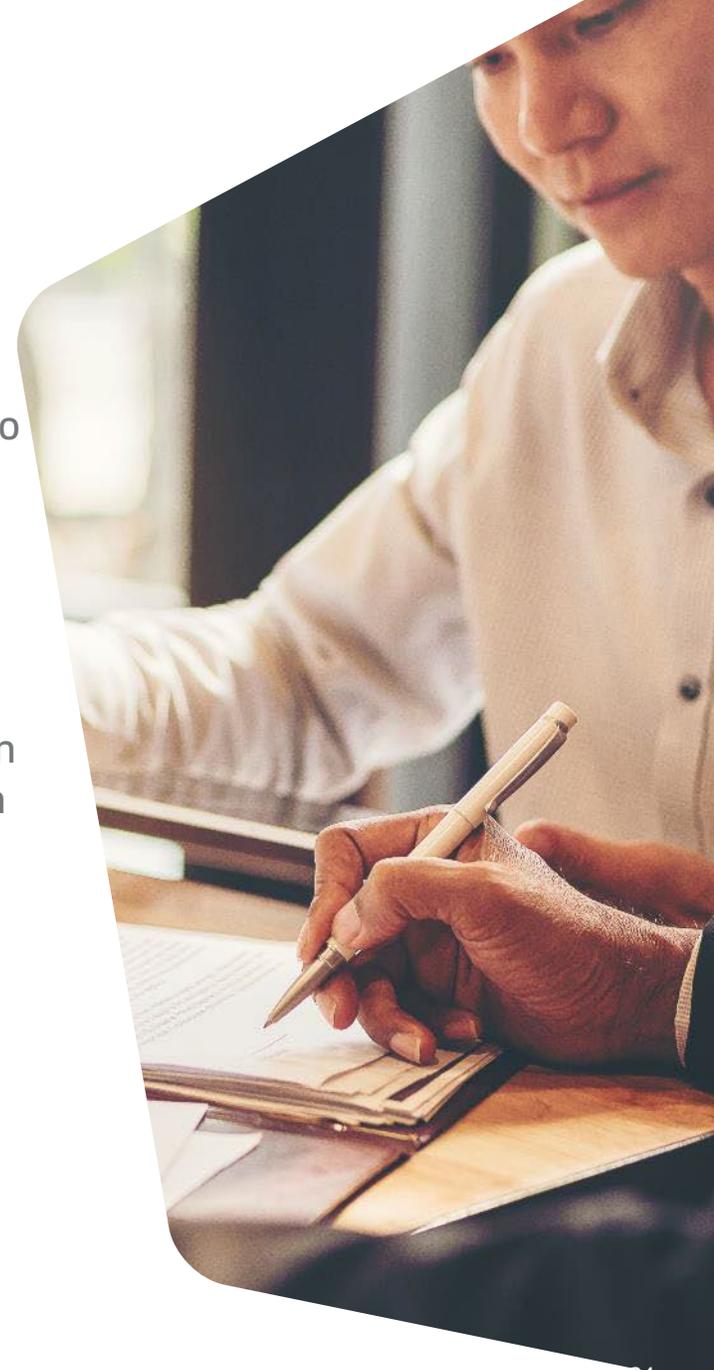
The Chief Governance and Compliance Officer has the power of veto over decisions by the Executive Board that do not comply with applicable legislation and internal regulations.

INDEPENDENCE

The selection process for the Chief Governance and Compliance Officer is carried out by a specialized recruitment company. Election by the Board of Directors for a two-year term. Removal depends on approval by the Board of Directors, with a majority of board members elected by minority shareholders.

STRENGTHENING GOVERNANCE AND COMPLIANCE

The creation of a new Executive Management responsible for the disciplinary accountability process, including those provided for in the Anti-Corruption Law, with the segregation of the investigation process from the accountability process.





Highlights in Energy Transition and Sustainability

Mauricio Tolmasquim
Executive Officer for Energy Transition and
Sustainability

Ana Paula Pacheco





In 2023 we started offering a new natural gas commercial portfolio and achieved records in new contracts signing



34 new contracts with
15 Distributors



R\$ 167 bi in estimated revenues*
22 MM m³/d starting 2024

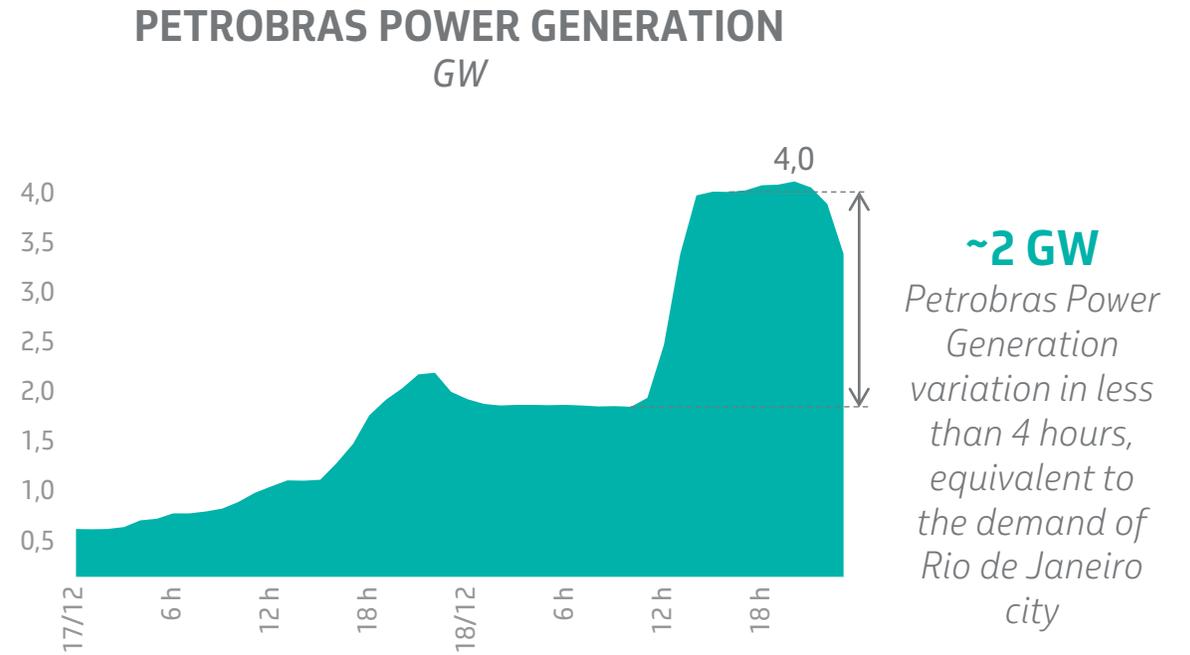
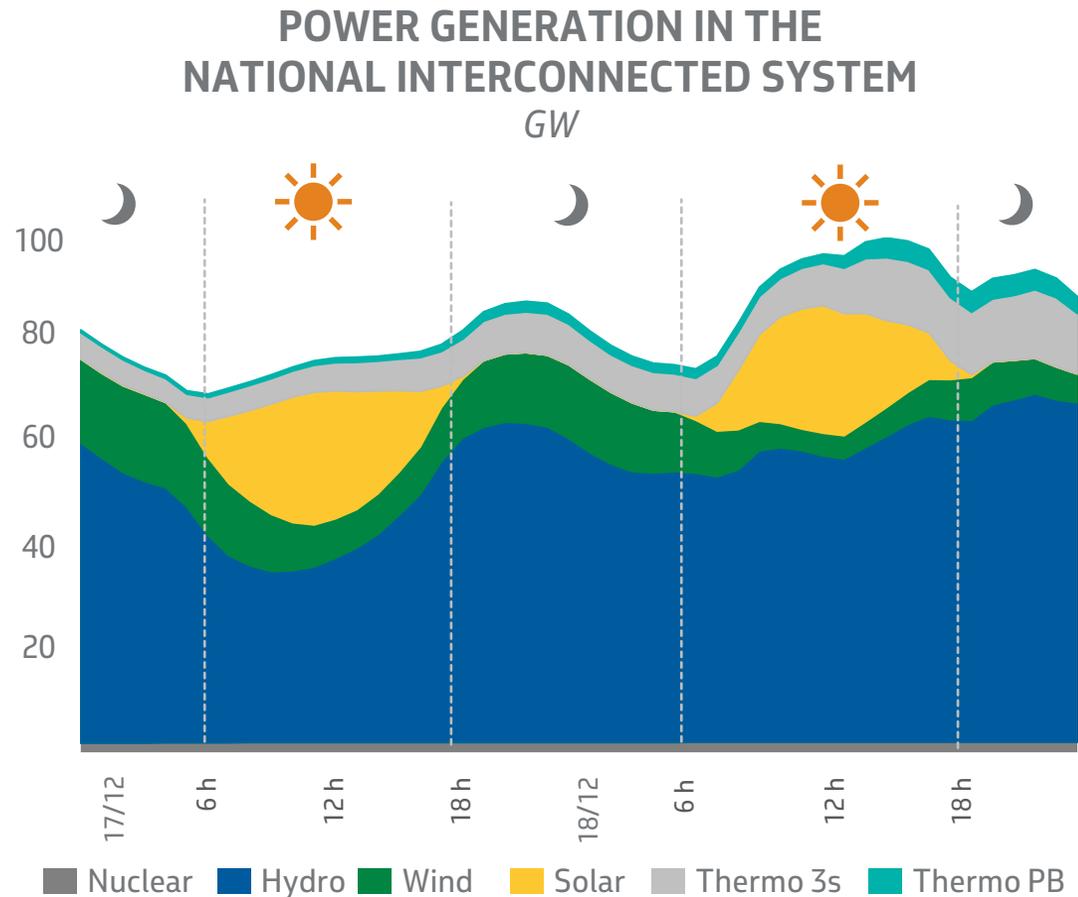


Disputes resolved

**Products offered with flexible quantities,
terms, indexing and start dates**

** Total revenues on a 11 years horizon.*

The flexibility of our thermal generation contributes to the reliability of the system, which presents high daily volatility, especially with the increase of renewable generation



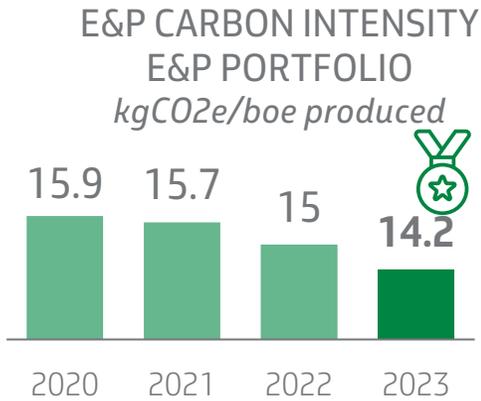
98,2%
Reliability of our thermal power plants



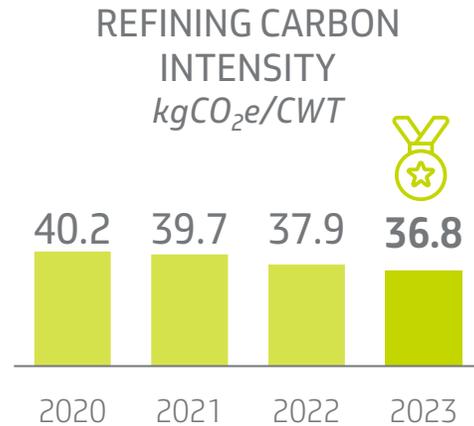
99,9%
Reliability in gas delivery

*Source: ONS

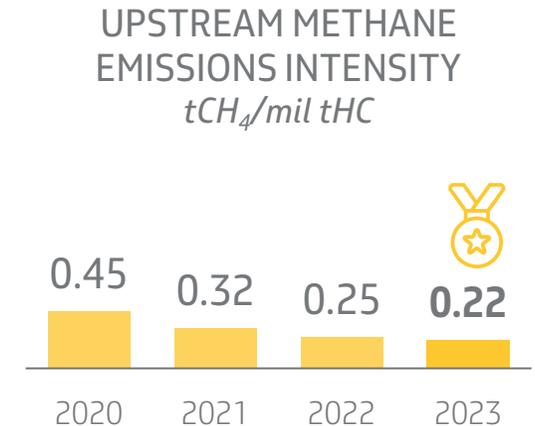
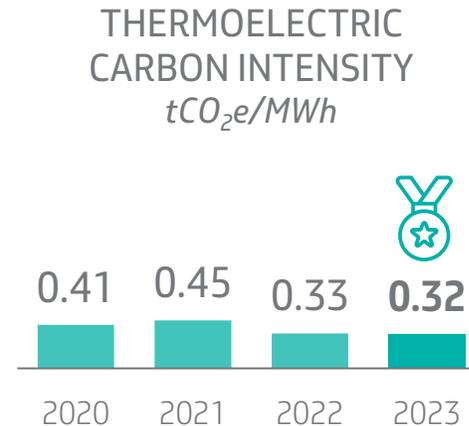
We achieved the best historical results in carbon and methane intensity



› The rate in Tupi and Búzios Fields is ~10 kgCO₂e/boe



› The rate at our larger refinery, REPLAN, is 31.6 kgCO₂e/CWT



We expanded our Decarbonization Fund from US\$ 600 million to US\$ 1.0 billion for the 2024-2028 period

- Our Decarbonization Fund's current portfolio have 30 projects with an estimated mitigation potential equivalent to 3 large FPSOs.

In 2023 we advanced in low carbon projects, with governance and focus on value generation.



We improved the internal **governance** of **energy transition** projects, developing systematic approaches for renewable investment projects and partnerships



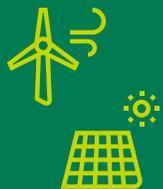
Initial portfolio including **45** business opportunities in energy transition segments



We approved **US\$ 100 million** up to 2028 for a **Venture Capital Fund**



CCUS pilot project in Rio de Janeiro (100 kta), and studies for industrial hubs in SP, RJ and ES,



Evaluation of opportunities for **30 GW** of **offshore wind power generation and low-carbon hydrogen projects and their products**, with a focus on large industrial consumers and opportunities for self-consumption

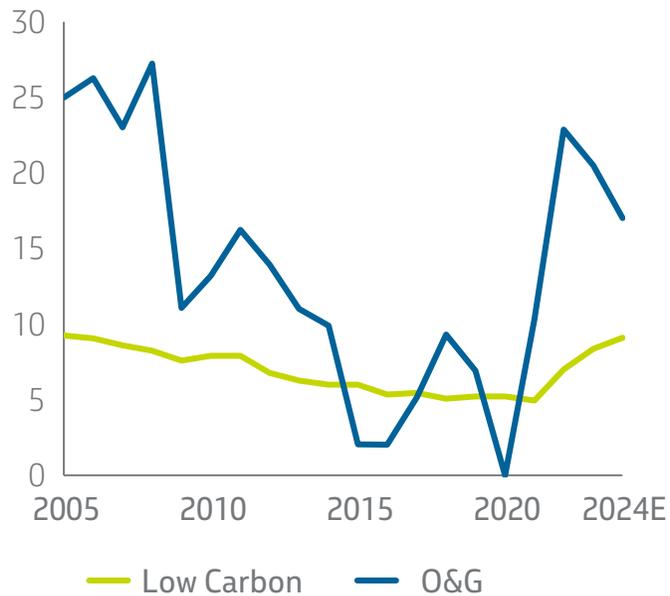


We launched the new Podium carbon neutral gasoline, expanded the Diesel R production capacity, and launched asphalt products with lower carbon and pollutants footprint

Long term, low-carbon investment creates value and should be a focus area for O&G companies

Despite lower short term returns in Low Carbon vs O&G ...

ROCE (%)

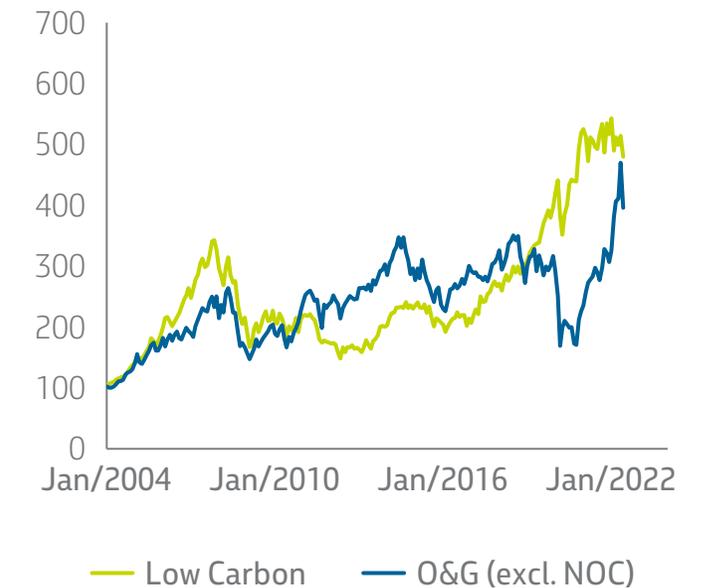


... low carbon investment can mitigate risks & create growth.....

- Diversify the portfolio **with new businesses**
- **Gain and protect market share** as customers prioritize sustainability
- **Mitigating rising CO₂ costs**
- Avoid risk of **resource scarcity** (e.g., materials, CO₂ offsets)
- Experience **less volatility in markets**

...over the long-term

TSR Index: January 2004 = 100



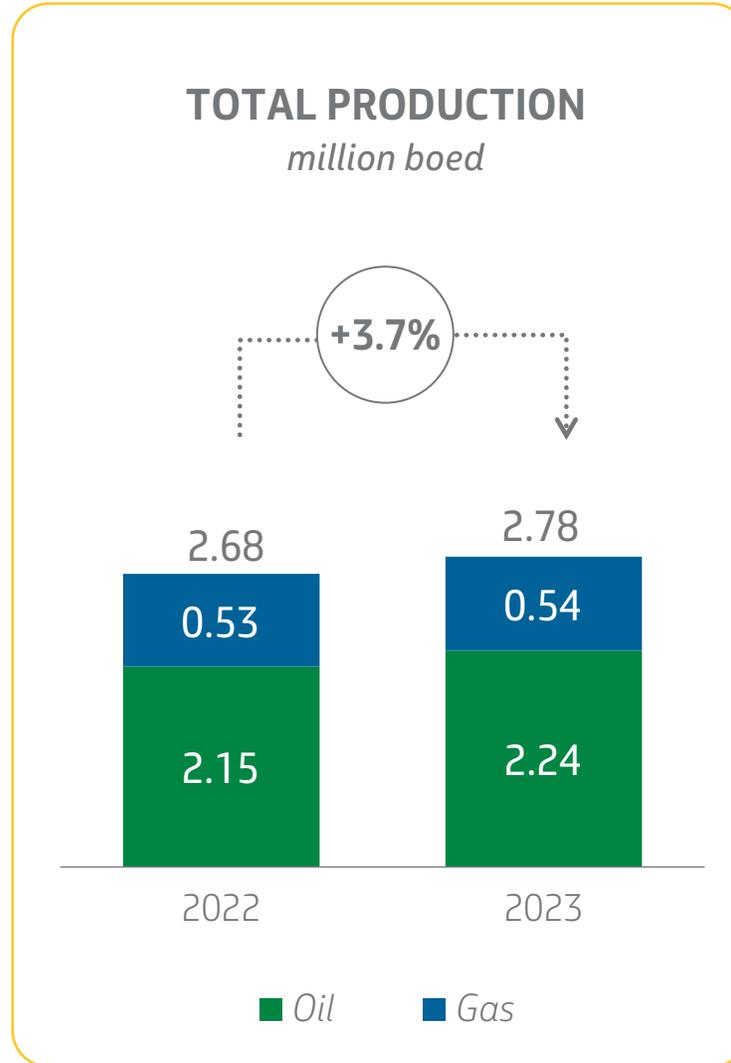
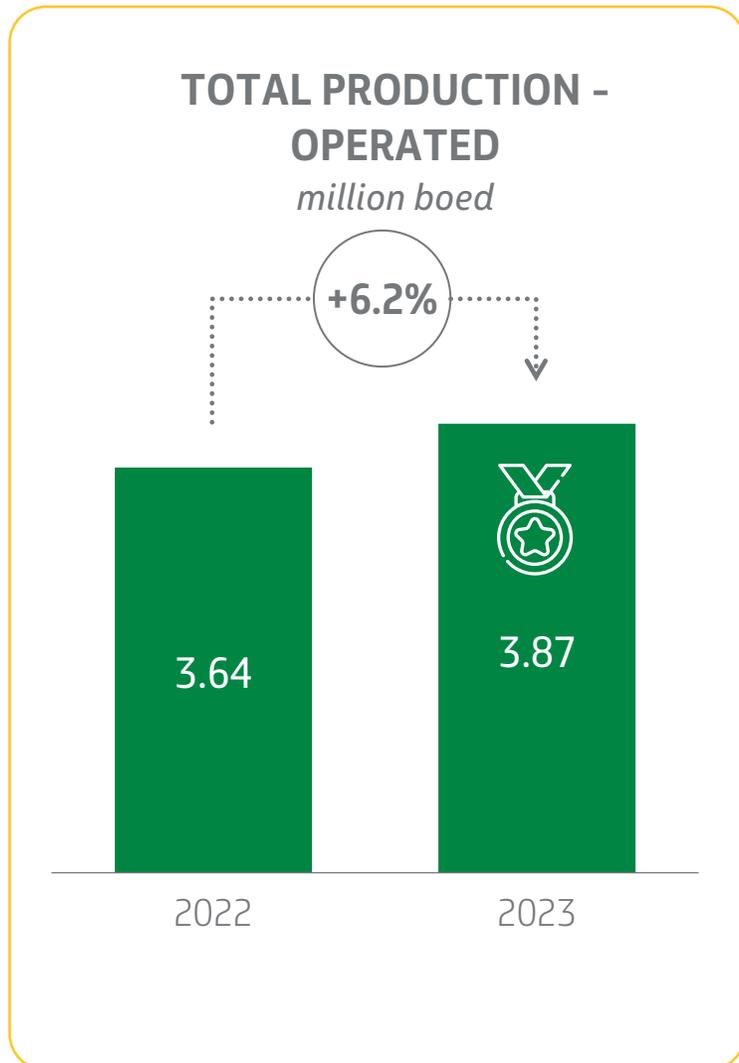


*Francirlani
Dallapicola*

Exploration & Production Highlights

Joelson Mendes
Chief Exploration & Production Officer

In 2023, a 6.2% increase in the operated production and 3.7% in total production



We achieved these important milestones and production records, while also having very good HSE results



We reached significant records on 4Q23 and 2023

4Q23

TOTAL PRODUCTION - OPERATED: **4.05 MMBOED**

PRE-SALT PRODUCTION: **2.33 MMBOED**

IUGA*: **98.0%**

2023

TOTAL PRODUCTION - OPERATED : **3.87 MMBOED**

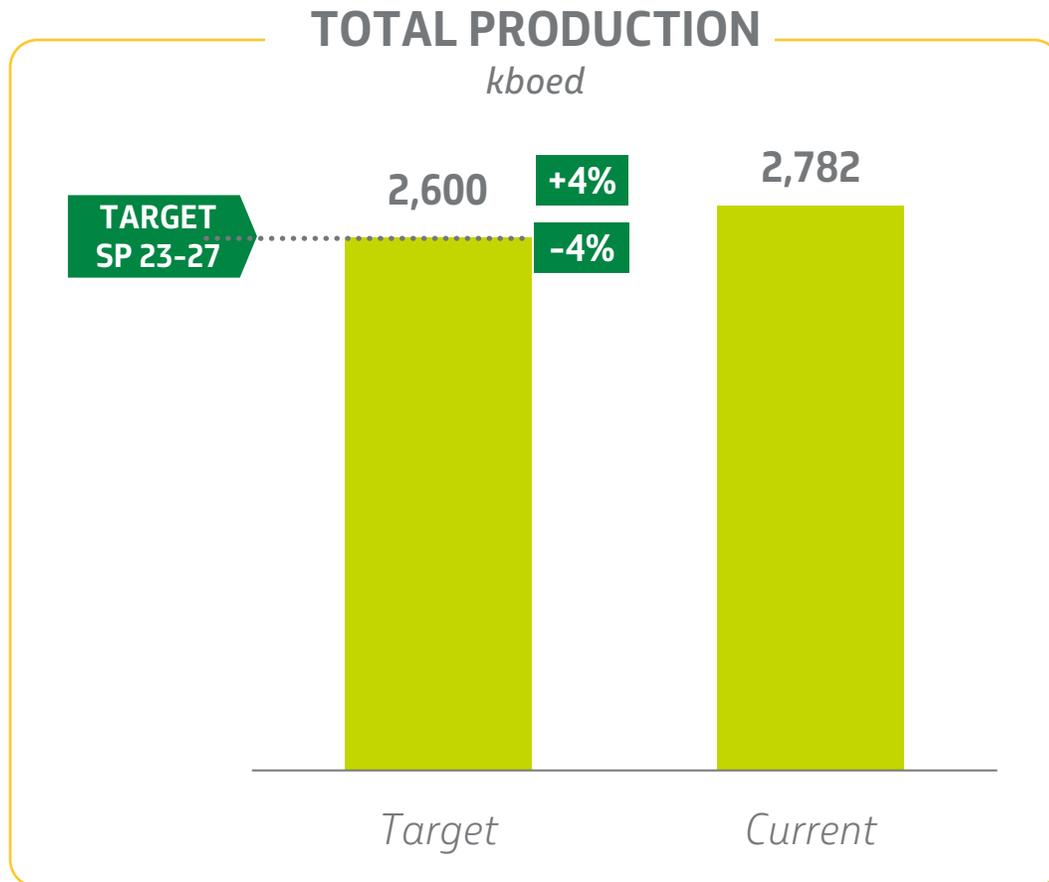
PRE-SALT PRODUCTION: **2.17 MMBOED**

IUGA*: **97.6%**

* Associated Gas Utilization Index

We have surpassed the target of the SP 23-27, of 2.6 MMboe/d in 2023

In the last 3 years, we have achieved more than 96% accuracy in our target. With a robust risk analysis, we have incorporated uncertainties related to the complexity of our reservoirs and the business.



HIGHLIGHTS

FPSO Anna Nery: 1st unit of the Marlim and Voador revitalization project to go into production, oil production capacity of 70 kbpd

FPSO Anita Garibaldi: 2nd unit of the Marlim and Voador revitalization project to go into production, oil production capacity of 80 kbpd

FPSO Almirante Barroso: 5th unit of the Búzios field, has reached the designed capacity of 150 kbpd in less than 5 months

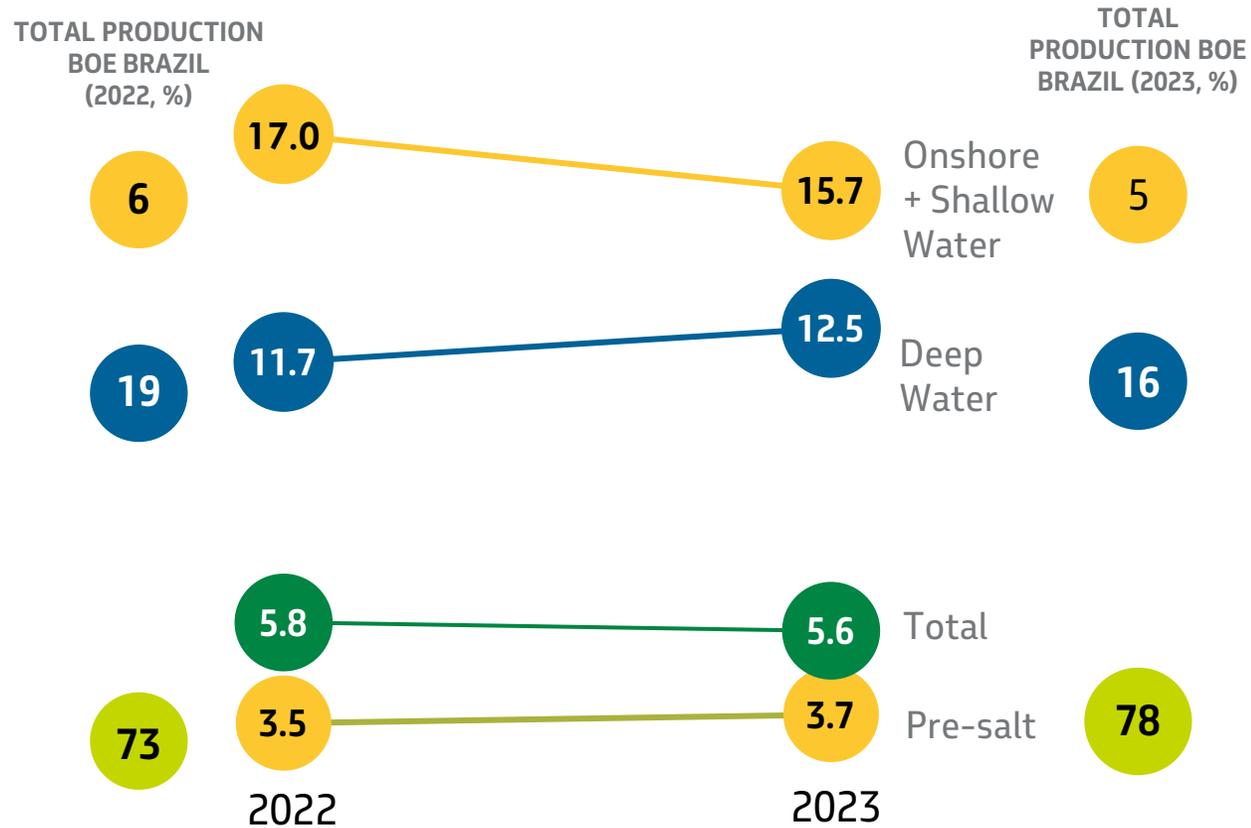
FPSO Sepetiba: 2nd definitive production system in the Mero field, designed capacity of 180 kbpd

P-71 and FPSO Guanabara have reached peak production

Reduction of 3% on the Lifting Cost and 14% on Total Cost, 2022 vs. 2023

LIFTING COST – BRAZIL*

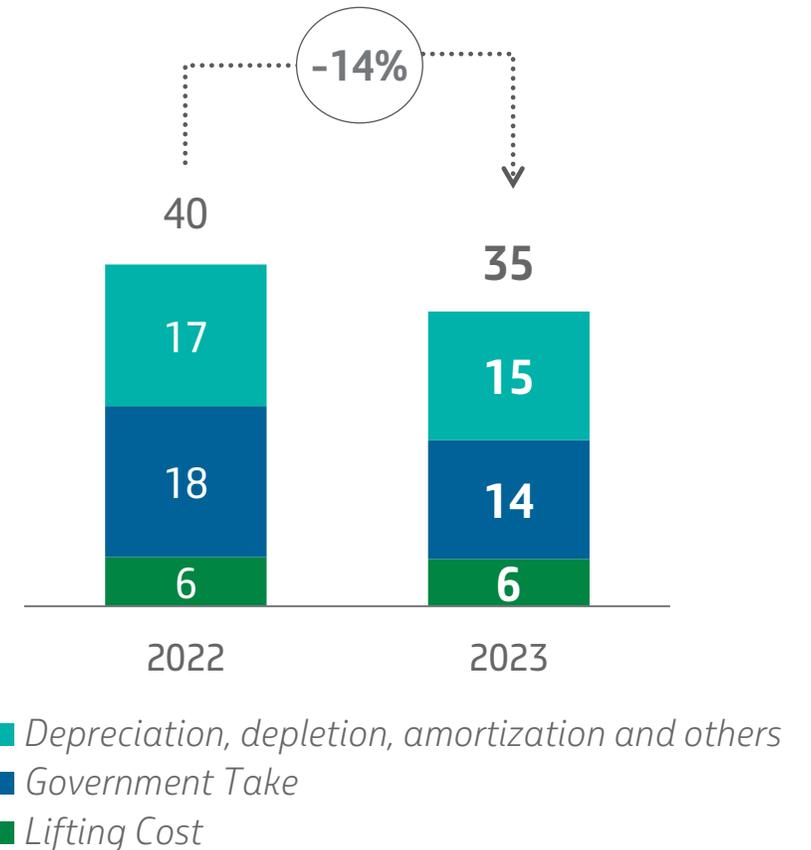
Per layer, US\$/boe, without leasing costs



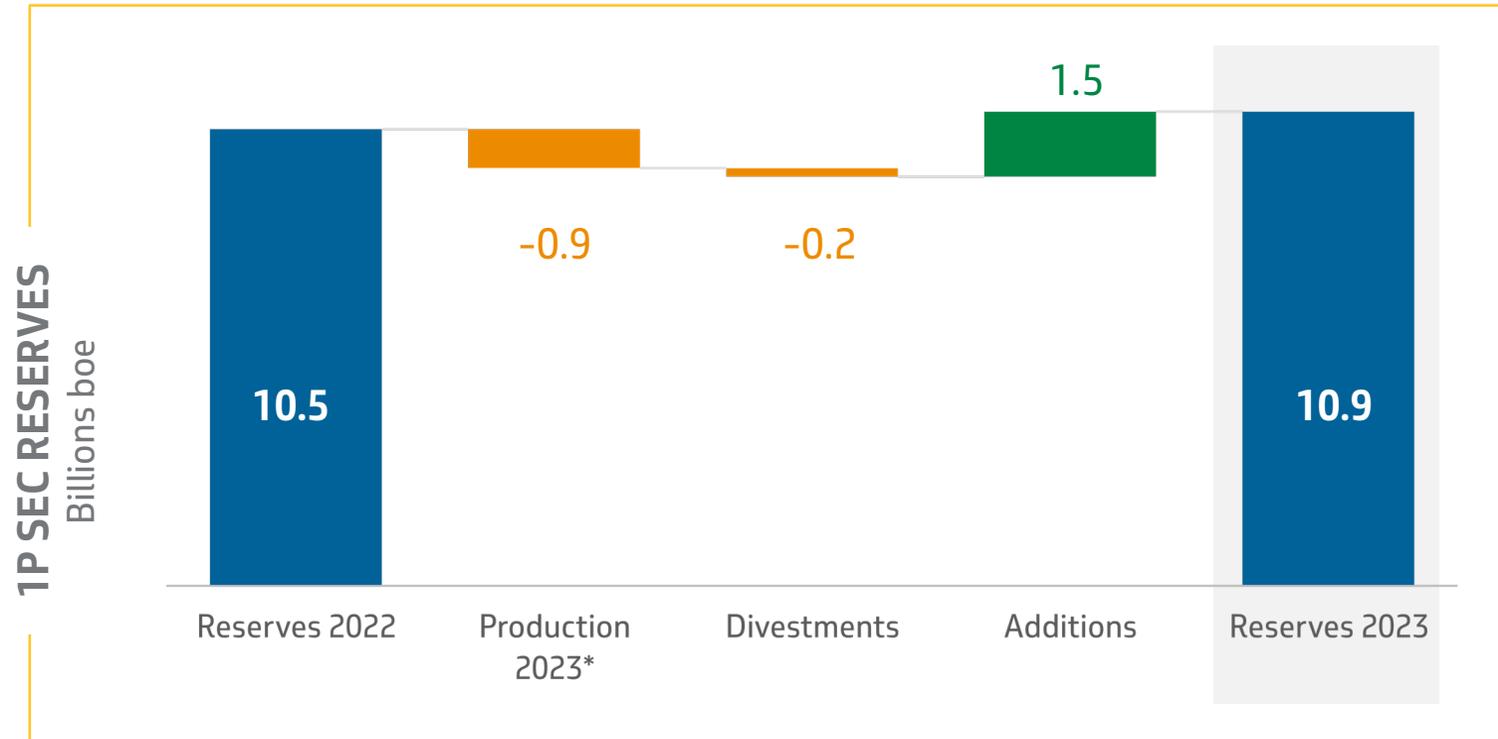
* Additionally, 1.2% of our total production comes from fields outside Brazil

TOTAL COST OF PRODUCED OIL

US\$/boe



We maintained a consistent trajectory of good results, and added 1.5 billion boe to our 1P SEC Reserves in 2023



Organic Reserves Replacement Ratio 2023
168%

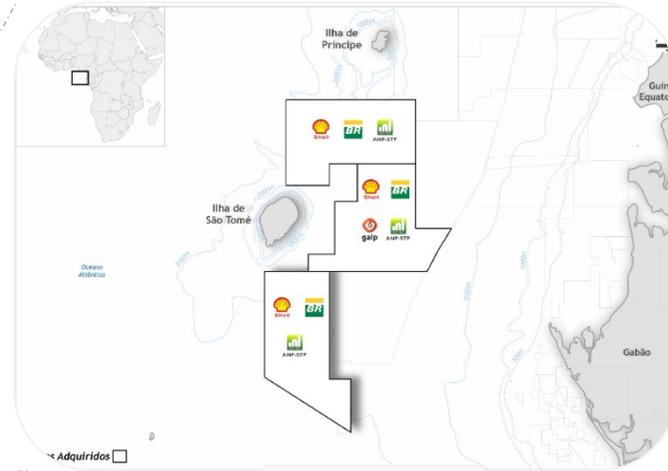
Good performance of our assets, with emphasis on the Búzios, Tupi and Atapu fields

Declaration of commerciality of Raia Manta and Raia Pintada fields (non-operated), in Campos Basin

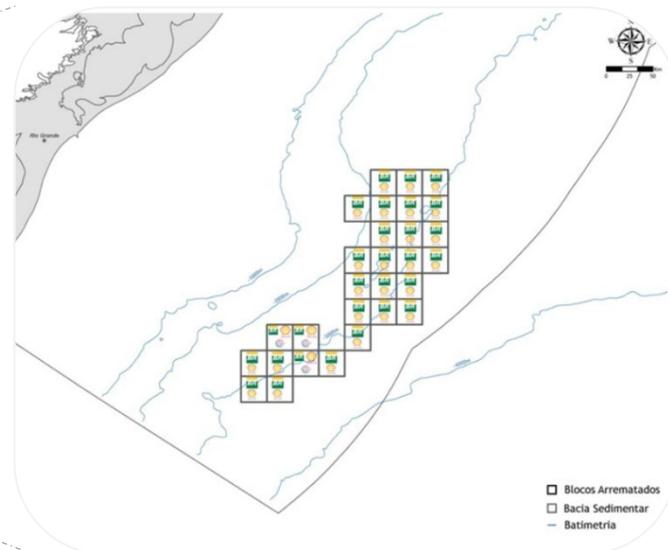
Approval of new complementary projects in the Campos Basin

* Does not consider: (a) natural gas liquids, since the reserve is estimated at a reference point prior to gas processing, except in the United States and Argentina; (b) volumes of injected gas; (c) production from extended well tests in exploration blocks; and (d) production in Bolivia, since the Bolivian Constitution does not allow the registration of reserves by the Company.

In line with our reserve replacement strategy and focus on the Atlantic, we acquired stakes in 3 blocks on the west coast of Africa and 29 in the Pelotas basin



Acquisition of 3 exploration blocks in São Tomé and Príncipe, on the west coast of Africa, in partnership with Shell (3) and Galp (1)



Acquisition of 29 exploratory blocks in the Pelotas Basin, in partnership with Shell (29) and CNOOC (3)

*Mariana Davoli e
Elisa Márcia*

Industrial Processes and Products Highlights

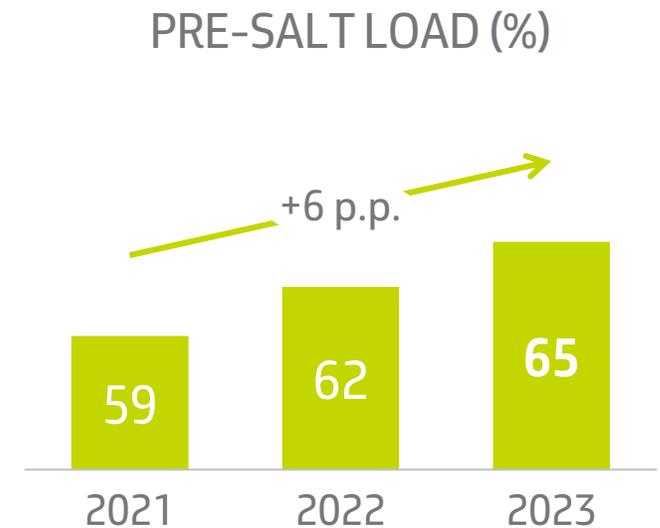
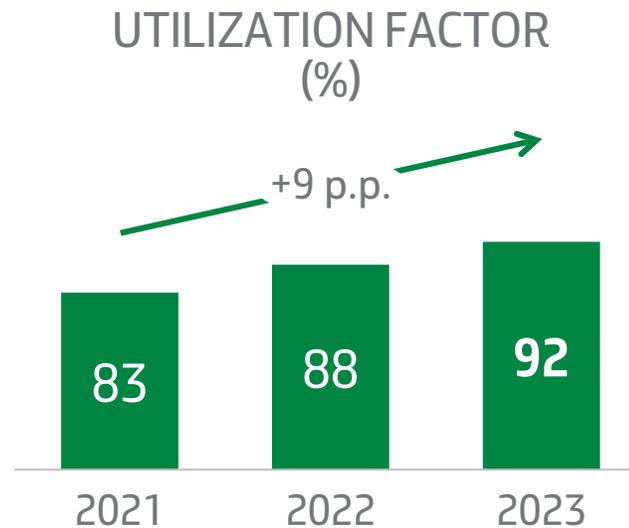
*William França
Executive Officer for Industrial
Processes and Products*





Fábila
Okuma

Utilization Factor achieved 92% in 2023, the best result since 2014



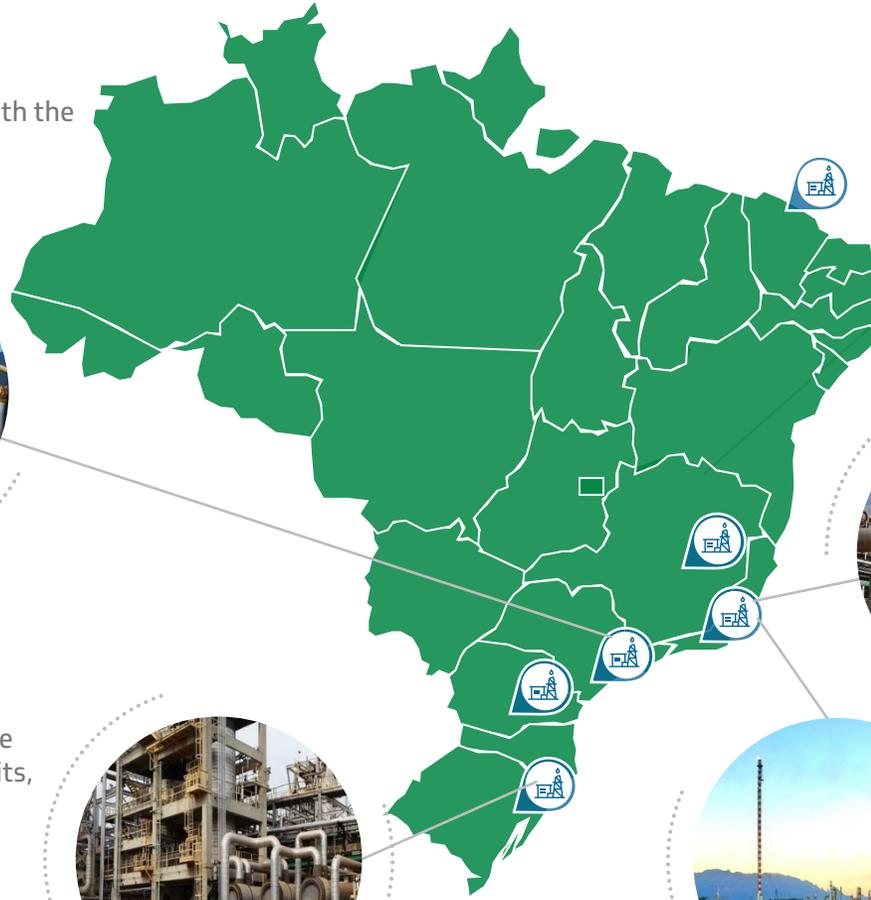
- Best utilization factor since 2014 with higher profitability and contributions from a higher participation of Petrobras' own oil in feedstock and increased yield of more value-added oil products.
- Record participation of pre-salt oil in feedstock, ensuring a lower carbon footprint in the throughput and enabling an increased yield of Middle distillates.
- Asphalt production at Lubnor reached 224,073 tons, the largest volume since 2011.

Reliability: Turnarounds, REVAMPs, and plants renewal

Assuring Operational Availability in the long term

RPBC 2023

Largest historical turnaround with the replacement of coke drums.
Total Personnel: 4,500



REGAP 2023

Major intervention for the recovery of the FCC Converter Unit, HDS, Distillation I, and two of the refinery's HDTs.
Total Personnel: 3,500

REDUC HDT 2023

HDT revamp for the production of more Ultra Low Sulfur Diesel:
+ 4,500 m³/day.
Total Personnel: 1,200



REFAP 2023

Largest historical turnaround of the refinery. After the return of the units, the plant registered a daily energy efficiency record measured by the energy intensity index.
Total Personnel: 4,000



REDUC ULUB 2023

General turnaround of the main lubricant producer at REDUC.
Total Personnel: 2,500



INVESTMENTS
R\$ 3.1 billion
IN 2023



PRODUCTION RECORDS IN 2023:

S10 Diesel

Refining (428 kbpd)
REPLAN (117 kbpd)
REPAR (44.6 kbpd)
REGAP (43 kbpd)
REDUC (24.2 kbpd)

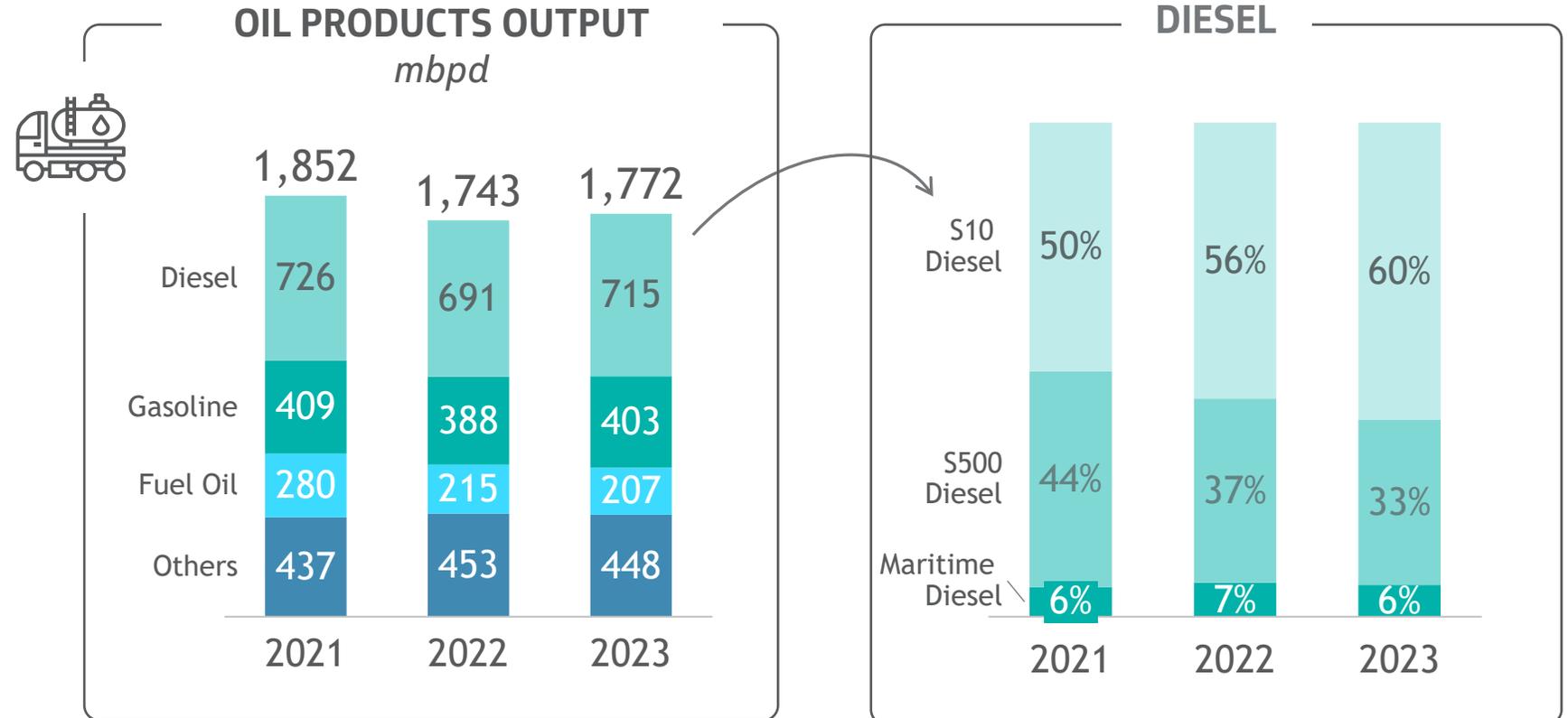
Gasoline

REPAR (58 kbpd)

Bunker

REPLAN (1,966 k ton)
RNEST (201 k ton)

In 2023 we reached a 60% share of S10 Diesel in the total Diesel production

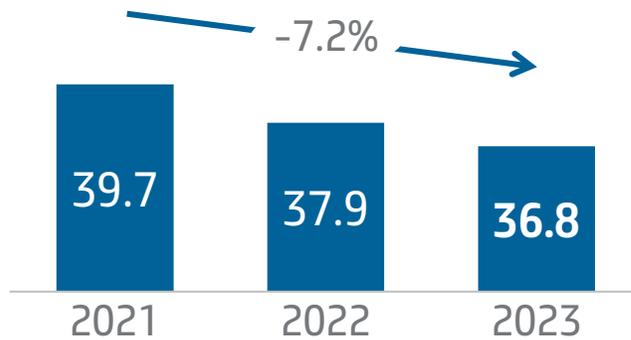


* Disregarding REMAN's Production in 2022: 1,715 kbpd

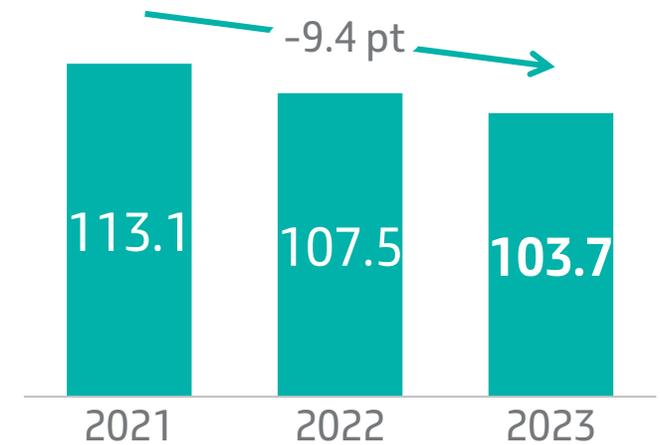


RefTOP Best historical result in energy efficiency

REFINING CARBON INTENSITY
(kg CO₂e/CWT)



ENERGY INTENSITY

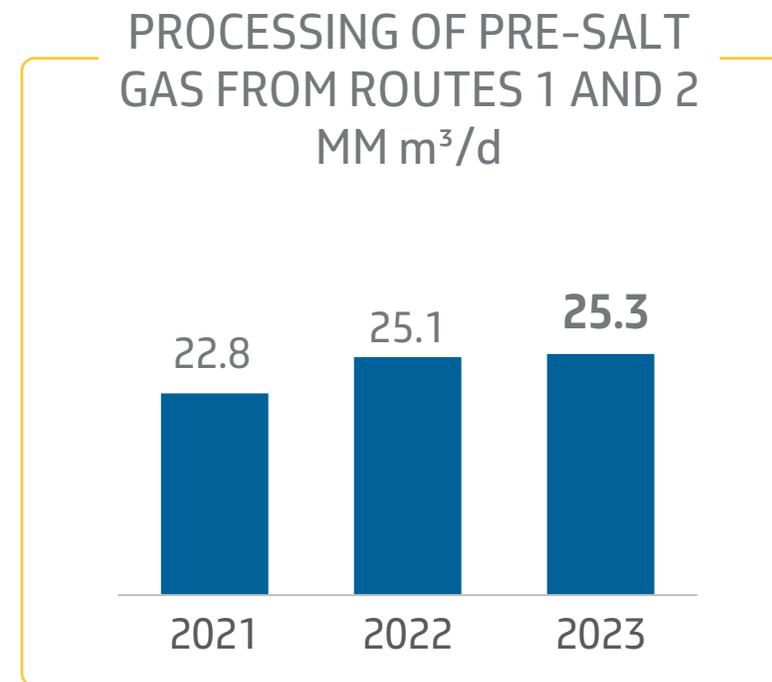
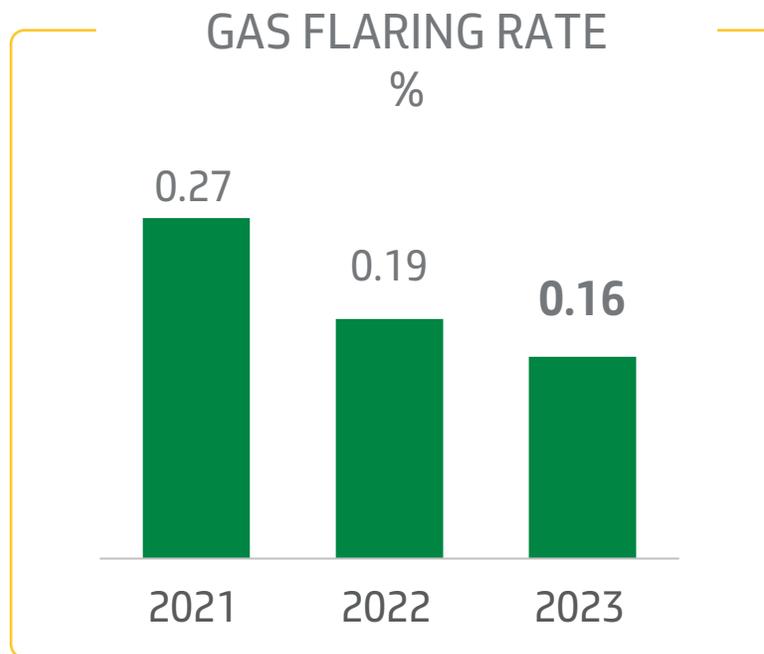


- The greenhouse gas emissions intensity has shown robust results and decreased by 14% compared to the year 2015.
- The burning of 490,000 m³/day of natural gas and the emission of 535,000 tons of CO₂ were avoided*, which is equivalent to removing approximately 88,000 gasoline-powered cars from the roads.
- Management actions, operational activities, maintenance, and projects support these energy efficiency results.

* Compare to 2022



In 2023 we reached our lowest historical level of gas flaring rate and record on pre-salt gas processed



- ✓ Achieving the best historical gas flaring rate, reflecting operational efficiency gains and contributing to the fulfillment of our emissions reduction commitments.
- ✓ Record Pre-Salt gas volume processed, which represented 86% of the gas transported through routes 1 and 2 in 2023.



2023 marked the return of investments in the fertilizers and petrochemical sectors

*Improvement of product portfolio,
contributing to the reduction of emissions*



Petrochemical Products

Verticalization with profitability;
Seek integration with refining; and
Finding investment alternatives for operations in the production of basic chemicals and resins, in line with the energy transition scenario.



Fertilizers

Nitrogenous Fertilizers Unit-3: in reevaluation;
ANSA: Assessment of alternatives for resuming production;
Studies of business partnerships for initiatives in the segment (in current plants and new plants) and in decarbonization production processes

Focus on high-value, low carbon products

 **RefTOP Program and Operational Reliability**



- CO Boiler (RECAP), Thermopower Plant (REDUC), FCC Blowers and Wet Gas Compressors
- Turnarounds

 **Crude Capacity Expansion** **225 kbpd**



- RNEST: Revamp Train 1 and implementation of Train 2
- Revamps of current facilities

 **ULSD Production Capacity Expansion** **> 290 kbpd*****



- New units HDT/HCC GASLUB**
- REPLAN new HDT
- Implementation of RNEST Train 2
- Revamps of current facilities

 **Non-fuel products** **12 kbpd**



- New unit HIDW GASLUB**

 **BioRefining*** **34 kbpd**



- Dedicated plant in RPBC (SAF / 100% renewable Diesel)**
- Dedicated plant GASLUB**

 **Petrochemicals and Fertilizers**



- Projects under study

* 100% Renewable (Diesel R100) | ** Projects 2028+ | *** 80% new capacity / 20% revamps

A woman with dark hair tied back, wearing an orange polo shirt with reflective grey stripes on the shoulders, is smiling and talking on a grey mobile phone. She is in a control room with several computer monitors in the background displaying data and charts. The image is partially framed by a white and yellow geometric shape on the left side.

Logistics, Commercialization and Markets Highlights

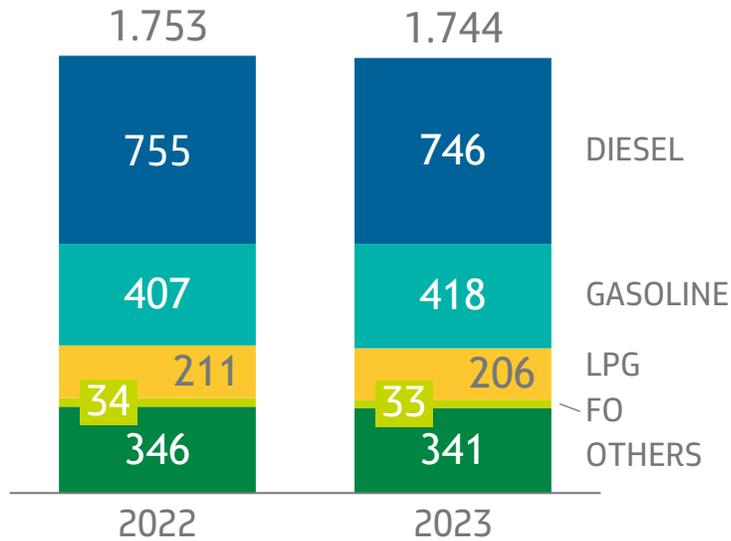
Daphine Mello

Claudio Schlosser
Chief of Logistics,
Commercialization and Markets

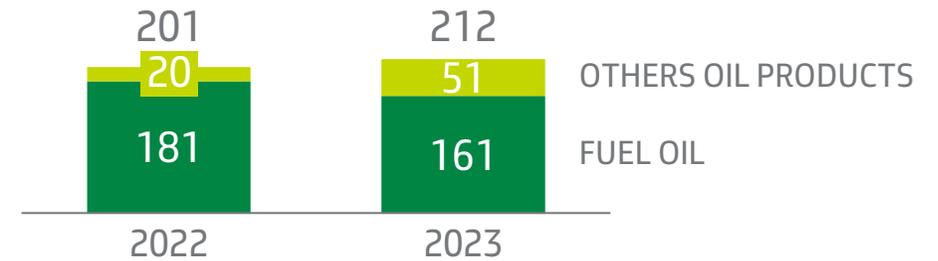
Oil Products Sales



BRAZIL
kbpd



EXPORTS
kbpd



- › Reduction in diesel sales is mainly associated with the increase in the mandatory biodiesel blend from 10% to 12% in April 2023 and the divestment of REMAN at the end of 2022.
- › Increase in gasoline sales by 2,7%, the highest in the last 6 years, impacted by the increase in the Otto cycle market and the gain in share in relation to hydrated ethanol in good part of the year.

Oil Sales

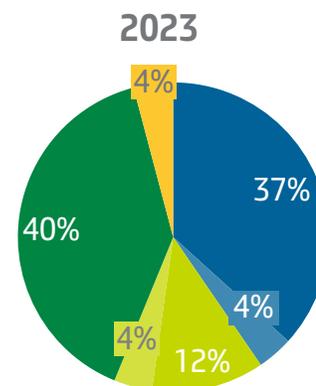
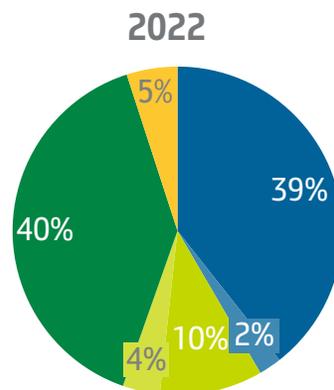
Higher oil exports in 2023 due to increased production.



Market share

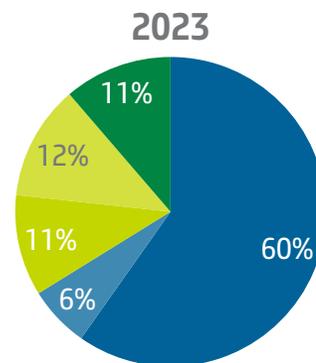
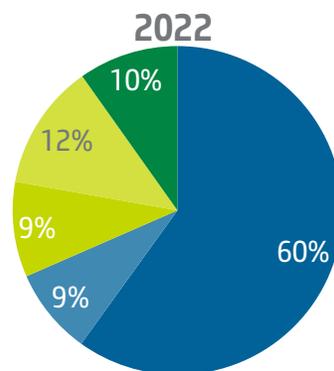
LIGHT VEHICLES (OTTO CYCLE)

- GSL A Prod. Petrobras
- GSL Imp. Petrobras
- GSL A Prod. Other Players
- GSL Imp. Other Players
- Ethanol (Anhydrous + Hydrated)
- NGV



HEAVY VEHICLES (DIESEL CYCLE)

- DSL Prod. Petrobras
- DSL Imp. Petrobras
- DSL Prod. Other Players
- DSL Imp. Other Players
- Biodiesel ¹



(1) % Biodiesel 2023: 10% jan-mar e 12% apr-dez

Source: ANP





New low-carbon products in 2023

› Petrobras Podium Carbon Neutral Gasoline

The first carbon neutral gasoline in the Brazilian market, with greenhouse gas (GHG) emissions fully offset.

› R5 Diesel

Diesel production capacity with 5% renewable content through co-processing at REPAR, RPBC, REPLAN, and REDUC: 3.4 million m³/year.



ISCC (International Sustainability Carbon & Certification) certification

› CAP PRO AP 70/85 and CAP PRO W 30/45

Environmental gains from recycling of asphalt and reducing energy consumption in application.

Logistics, Commercialization and Markets Highlights

EXECUTION OF COMMERCIAL STRATEGY

We began to consider our best refining and logistics conditions to practice competitive pricing, in balance with the national and international markets, without passing on to our customers the volatility of daily price fluctuations.



NEW SALES HUB

Continuing our strategy to improve market and customers access with the sale hub implementation **Rondonópolis (MT)** in February 2023, we started the commercialization of diesel and gasoline in a new sales hub in **Rio Verde (GO)** in February 2024.



INTERNATIONAL HIGHLIGHT IN PLATFORM RECYCLING

Petrobras has been ranked among the reference companies in the world for responsible vessel disposal by the **Shipbreaking Platform NGO**, in a report published in January 2024.



A woman with dark hair, wearing a white lab coat, safety glasses, and a colorful headband, stands in a laboratory. She is holding a silver gas cylinder. The background features large white robotic arms and various laboratory equipment. The scene is brightly lit with overhead lamps.

Cidelmara Coelho

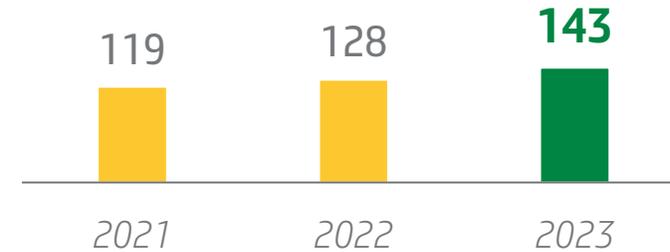
Highlights in Engineering, Technology and Innovation

Carlos Travassos
Chief Engineering, Technology and Innovation
Officer

Great achievements in innovation



NATIONAL RECORD
of **patents** applied for the third consecutive year



RELEVANT AWARDS IN 2023



Carbon Sequestration Leadership Forum

For contribution to the development of CCUS technology



ANP Innovation Award

Winners in **4** out of **5** categories



Ranking 100 Open Startups Top Open Corps

1st place in Oil and Gas

12th place overall



Value Innovation Award Press

1st place in Oil and Gas

2nd place overall



MIT Technology Review Press

Among the 20 most innovative companies in Brazil

7 times
awarded
by OTC

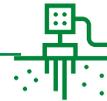
5 AWARDS · OTC International
2 AWARDS · OTC Brasil



The highest award in
the global Oil and Gas
industry

We were awarded by OTC for technologies applied to the Marlim Revitalization Project and other fields in the Campos Basin

- 2 new FPSOs already in operation
- 55% reduction in greenhouse gas emissions
- 12 wells in production, connected to the new Marlim FPSOs
- + about 60 wells to be connected



9 PIONEERING TECHNOLOGIES

with emphasis on:

- **TOT-3P: Well Design**
Accelerates the construction of post-salt wells, from 110 days to 56 days, on average
- **Standardization of flexible pipe envelopes**
Reduces process duration of engineering, contracting and supply
- **New methods and tools for WCTs¹ and flexible pipelines life extension**

¹ Wet Christmas Trees



P-71 at Itapu · Dec/2022



FPSO Anna Nery at Marlim · May/2023



FPSO Alm. Barroso at Búzios · May/2023



FPSO Anita Garibaldi at Marlim and Voador · Aug/2023



FPSO Sepetiba at Mero · Dec/2023

We met the challenge of delivering 5 new FPSOs in 1 year

A relevant milestone representing:



Installed capacity to produce **630 thousand** barrels of oil per day



1,300 Km of lines¹



106 wells¹

¹ Full scope of projects, including lines to be launched and wells to be connected.



FPSO Alm. Barroso

With excellent results and new records



- New **record in the Pre-salt**, top production of the FPSO Almirante Barroso in Oct 2023, in **less than 5 months**, with 3 producing wells



- **Record of 57 connections**, highest mark since 2017



- We concluded the Strategic Program in Wells, which **reduced the average cost** of well construction in Búzios by **around 30%** and delivered a new level of safety in the construction of wells in the pre-salt



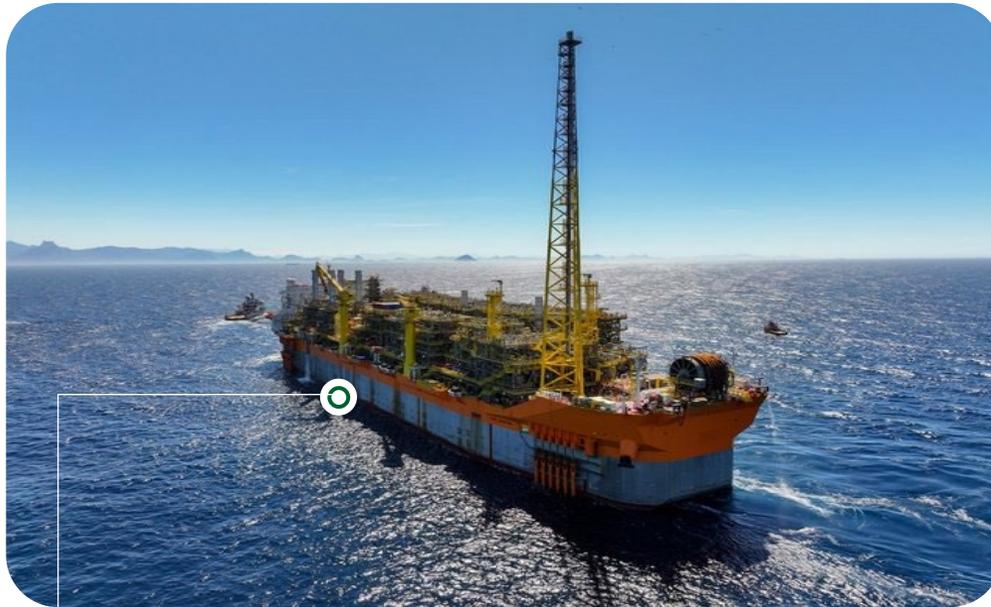
- Record number of pipeline and hull inspections, with around **3,500 line inspections** and **1,350 hull inspections** carried out



- We collected **1,100 km** of pipelines, a historic record.
- Replacement of 100% of deep dives (>50 meters) by underwater robots

FPSO Sepetiba starts operation in the Mero field

2nd definitive system of the Mero field



Capacity to produce **180 thousand** barrels of oil daily and process **12 MM m³** of gas

**1st oil on
Dec 31st**

Ramp-up:
expected completion
in 2024

Total of 16 wells,
among producers and
injectors

MERO FIELD



- 3 FPSOs in operation¹
- 2 FPSOs em under implementation

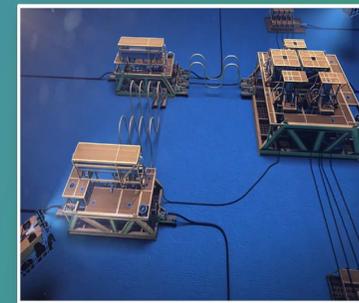
INSTALLED CAPACITY¹:



• **2023**
410 kbpd

• **2025**
770 kbpd

Technology



HISEP[®] – *Subsea High Pressure Separation System* – contract signed in January 2024

¹ Considering the FPSO Pioneiro de Libra

We advanced in the decommissioning of platforms using the new green disposal model



P-32

Green policy

- P-32 – At Rio Grande Shipyard
- P-33 – unmoored and laid-up at Porto of Açú in February 2024



- *Technical criteria to ensure respect for ESG practices*
- *Focus on generating value, circular economy, safety and respect for people and the environment*



*We were recognized by the NGO **Shipbreaking Platform** for establishing a **new green disposal policy**, as a process that **raises the standard of global ship recycling.***

In the downstream, we concluded projects with gains in operational safety and to meet environmental commitments

RPBC

Coke Drums



Start of operation in May 2023, increasing safety, reliability and operational performance

TTCUB¹

Cubatão Pumps



Start of operation in August 2023, generating greater reliability and safety for the electrical and oil supply system for RECAP

Reduc

Drainage basins²



Start of operation in November 2023, with increased safety and reliability in the segregation of oily, contaminated and rainwater drainage

¹ *Cubatão terrestrial terminal*

² *Compliance with environmental regulator conditions*

We advanced in projects to improve fuel quality and increase gas supply

Diesel S-10

*Ultra-low-sulfur diesel
(<10 ppm)*

REDUC · HDT revamp

Started operation in July 2023

REPLAN · New HDT

Construction in progress

REVAP · HDT revamp

Contract signed in January 2024



+ 132 kbpd of Diesel S-10
production capacity

SAF and Diesel R100

Contract signed

*for the acquisition of HEFA¹
technology, which will be
adopted in RPBC's
dedicated plant*



UPGN Route 3 -Gaslub

**Works to complete
the UPGN in the final
phase**

*Start-up scheduled
for 2H24*



*Natural Gas Processing Unit
(UPGN) - Polo Gaslub*

¹ Hydroprocessed Esters and Fat Acids

We resumed the RNEST Train 2 Project, which represents more capacity and quality improvement of the refinery products



SNOx- RNEST

EXPANSION IN PROGRESS

SNOx

+15 kbpd

Construction in progress.
Starts operation in 2024

REVAMP
Train 1

+15 kbpd

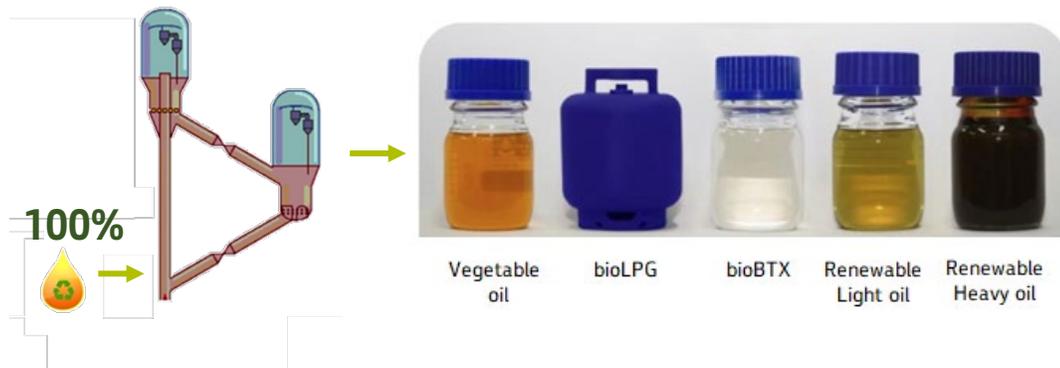
Expansion and modernization in progress.
Starts operation in 2025

Train 2

+130 kbpd

Contracting in progress

We successfully completed testing for biofuel production integrated with refining



**100% renewable feedstock
processing in FCC**

A historic milestone

TECHNOLOGY DEVELOPED AT CENPES

- *Partnership with Riograndense Refinery - opportunity of retrofitting as the first biorefinery in Latin America (Petrobras-Braskem-Ultra JV)*
- *Dedicated catalyst produced at FCC SA (Petrobras-Ketjen JV)*
- *First industrial test carried out in November 2023 with 100% soybean oil, generating fully renewable petrochemical products*
- *Second test scheduled for the 2nd half of 2024, with co-processing of mineral filler with bio-oil*

Engineering, Technology and Innovation Office

Our Research Center's figures (RD&I)



Human
Capital

1086

Collaborators

963

Researchers

123

Consultants

71

Managers

8

Coordinators

44

Supervisors



Investment
in RDI in 2023

R\$ 3.6bi



Received 5 Innovation
Awards 2023



Innovation
partners

+180

Partnerships in
progress

+800

Startups

+50

Challenges
published/year

+100

Engaged in
our projects

+9000

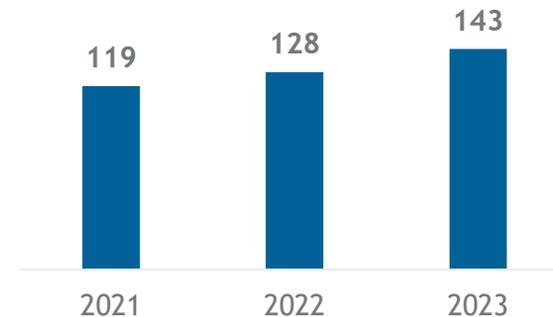
CONEXÕES PARA INOVAÇÃO



Registered
Patents

+1000

National record
of patents in 2021, 2022 and 2023



Diretoria de Engenharia, Tecnologia e Inovação

The women of our Research Center (RD&I)



270

25%
Women

203

21%
Researchers

39

32%
Leaders



Awards in 2023

Brazilian Women in Chemistry
in Chemistry 2023, category
winner Industry Leader

**Aline Machado
de Castro**

R&D HIGHLIGHTS LED BY WOMEN

Márcia Khalil

Digital Monitoring of guarantee
of flow(GARESC) occurrences

Andrea Pinho

Test at the Riograndense Refinery,
which used 100% vegetable oil in the
FCC¹ unit

Thamires Barreto

Remote sensing for geological
hydrogen fairy circles

Kátia Moniz

Podium gasoline
Carbon Neutral

Teresa Villano

Development of an anti-corrosion
adhesive made from 100% recycled PET

Ana Musse

CO₂ capture, use and geological
storage (CCUS)

Helga Schluter

Implementation and scope of magnetic devices in topside systems to
reduce fouling

Priscilla Florido

¹ Fluid Catalytic Cracking

Q&A

4Q23 Performance Webcast

March 8, 2024

Vivian Palmeira

