

# *Production & Sales Report 3Q24*

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***FPSO Maria Quitéria***  
*1<sup>st</sup> oil on October 15*



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## DISCLAIMER

This report may contain forward-looking statements about future events. Such forecasts reflect only the expectations of the company's management about future economic conditions, as well as the company's industry, performance and financial results, among others. The terms "anticipates", "believes", "expects", "predicts", "intends", "plans", "projects", "aims", "should", as well as other similar terms, are intended to identify such forecasts, which, of course, involve risks and uncertainties foreseen or not foreseen by the company and, consequently, are not guarantees of the company's future results. Therefore, future results of the company's operations may differ from current expectations, and the reader should not rely solely on the information contained herein. The company undertakes no obligation to update the presentations and forecasts in the light of new information or future developments. The figures reported for 2Q24 onwards are estimates or targets. The operating data contained in this report has not been audited by the independent auditor.



## Highlights – 3Q24

In 3Q24, Petrobras' total production of oil, NGL and natural gas reached 2,689 Mboed, in line with 2Q24. The highlights were the production peak of FPSO Sepetiba, in the Mero field, with the start-up of 3 new producing wells, and the start-up of new wells in Búzios and Tupi fields' projects.

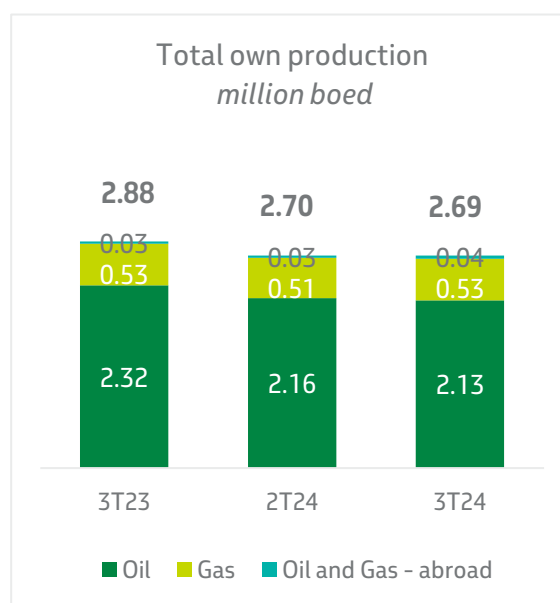
In October, we highlight the start-up of a new production system, which will contribute to production in 4Q24.

The FPSO Maria Quitéria began operating on October 15. The platform, located in the Jubarte field, in the pre-salt of the Campos Basin, is fitted with technologies to reduce emissions, including the combined cycle in energy generation, which allows for higher operational efficiency associated with a reduction of around 24% in operational greenhouse gas emissions. Its production capacity is 100 Mbpd of oil and 5 MMm<sup>3</sup>/d of natural gas.

The FPSO Marechal Duque de Caxias is on location, with the interconnection of the first producer well completed, and in the final stages of preparation for start-up. The unit has the capacity to produce up to 180 Mbpd of oil and 12 MMm<sup>3</sup>/d of natural gas and will be the third permanent production system for the Mero field, in the pre-salt Santos Basin.

On October 26, the FPSO Almirante Tamandaré arrived on location, coming from China. The platform will be the first high-capacity unit to be installed in the Búzios field, with the potential to produce up to 225 Mbpd and process 12 MMm<sup>3</sup>/d of natural gas.

The Rota 3 Natural Gas Processing Unit (UPGN), located at the Boaventura Energy Complex (Itaboraí - RJ), started up its first module in September. The unit is currently gasified, and the first commercial gas is expected to happen in the coming days. With the start-up of the second module, planned for later this year, the total processing capacity will be 21 MM m<sup>3</sup>/d.



**The Tupi asset, located in the pre-salt Santos Basin, has completed the unprecedented milestone of 3 billion barrels of oil (bbl) of accumulated production, of which 2.2 billion barrels of oil (bbl) relate to the shared deposit and 0.8 billion barrels of oil (bbl) to the Iracema area. This is the first production area in Brazil to reach this milestone, 15 years after it began operating.**



The efforts and integration of several areas of the Company contributed to the anticipation of the FPSO Maria Quitéria's first oil, which started-up on October 15. The original schedule, set out in the 2024-2028+ Strategic Plan, was to start-up in 2025.

In 3Q24, production and sales of oil products on the domestic market increased by 4.2% when compared to 2Q24, driven by the seasonal increase in demand. In September 2024, among our refining facilities, we had the best monthly utilization factor in the year, reaching 97%, which reflects our high level of operational efficiency and the close integration with the company's logistics and marketing areas. This resulted in total production of 1,818 Mbpd, prioritizing high value-added products (diesel, gasoline and QAV accounted for 68% of total production), even with the maintenance stoppages carried out at REPLAN, REDUC, RPBC and REVAP during the quarter.



The share of pre-salt oil in refining feedstock reached 73%, a record for a quarter (an increase of 4 p.p. when compared to 2Q24), showing greater logistical and operational flexibility in the decision to use these streams more efficiently. In addition, in August, the pre-salt oil processed feedstock was 76%, a new monthly record.



Gasoline production in 3Q24 was 438 Mbpd, a quarterly record <sup>1</sup>.



In 3Q24, we had 3 consecutive months of advances in sales of diesel with renewable content (Diesel R), reaching 3.7 Mbpd in September, double the previous record set in April 2024. In addition, with a focus on competitiveness and decarbonization, we established an agreement with the country's biggest mining company to test and study the supply of low-carbon products, including the use of Diesel R in the mining company's vehicles, establishing the first direct sale of this type of diesel by Petrobras.

*We are developing more low carbon products and honoring our commitment to decarbonize our activities. The partnership with Vale is a further realization of Petrobras' goal of improving the company's production capacity and logistics structure in order to deliver to the market low carbon products, such as Diesel R, and reinforce our decarbonization strategy." Magda Chambriard, CEO*

<sup>1</sup> Considers the current refining facilities.



# Our Operating Results

## Exploration & Production

	3Q24	2Q24	3Q23	9M24	9M23	Variation (%)		
						3Q24 X 2Q24	3Q24 X 3Q23	9M24 X 9M23
<b>Crude oil, NGL and natural gas production - Brazil (Mboed)</b>	2,654	2,664	2,843	2,687	2,696	(0.4)	(6.6)	(0.3)
Crude oil and NGLs (Mbpd)	2,129	2,156	2,318	2,173	2,188	(1.3)	(8.2)	(0.7)
Onshore and Shallow water	32	35	34	34	46	(8.6)	(5.9)	(26.1)
Post-salt - deep and ultra deep	275	306	412	308	380	(10.1)	(33.3)	(18.9)
Pre-salt	1,822	1,815	1,872	1,831	1,761	0.4	(2.7)	4.0
Natural gas (Mboed)	525	508	525	513	508	3.3	-	1.0
<b>Crude oil, NGL and natural gas production - Abroad (Mboed)</b>	35	34	34	34	35	2.9	2.9	(2.9)
<b>Total production (Mboed)</b>	2,689	2,699	2,877	2,721	2,731	(0.4)	(6.5)	(0.4)
<b>Total commercial production (Mboed)</b>	2,337	2,356	2,537	2,374	2,401	(0.8)	(7.9)	(1.1)
<b>Total operated production (Mboed)</b>	3,869	3,737	3,982	3,821	3,807	3.5	(2.8)	0.4

In 9M24, Petrobras achieved a total production of 2,721 Mboed. Based on current performance, along with the forecast of ramp-ups and start-ups of new platforms and new wells in 4Q24, we reaffirm our expected production guidance for 2024. We expect to stay within the 2024-28+ Strategic Plan planned total production range of 2.8 MMboed +/- 4%.

With regard to the 3Q24 performance, oil production in the pre-salt was 1,822 Mbpd, in line with 2Q24, mainly due to higher production at FPSO Sepetiba (Mero field), which reached its peak with three new producing wells, and the start-up of two new wells in Santos Basin, one at FPSO Almirante Barroso (Búzios field), and a complementary well at FPSO Maricá (Tupi field), offset by the higher volume of stoppages. Additionally, five new injection wells started operating in Santos Basin.

Post-salt production reached 275 Mbpd, 10.1% lower than 2Q24, mainly due to interventions to comply with operational safety requirements, to a higher volume of losses from scheduled maintenance stoppages and to the natural production decline. Five injection wells started operating in Campos Basin.

Onshore and shallow water production was 32 Mbpd, 3 Mbpd lower than 2Q24, due to higher losses from maintenance stoppages.

Overseas production, from fields in Bolivia, Argentina and United States, was 35 Mboed, in line with 2Q24.



*"Bringing forward the first oil from FPSO Maria Quitéria is the result of our daily efforts to look for opportunities to speed up projects and overcome challenges. In line with the company's decarbonization strategy, the platform represents higher installed oil and gas production capacity, is more efficient and has modern technologies to reduce greenhouse gas emissions."*

*Renata Baruzzi, Executive Officer for Engineering, Technology and Innovation*





## Refining, Transportation & Marketing

	3Q24	2Q24	3Q23	9M24	9M23	Variation (%)		
						3Q24 X 2Q24	3Q24 X 3Q23	9M24 X 9M23
<b>Total sales volume in the domestic market (Mbpd)</b>	<b>1,771</b>	<b>1,700</b>	<b>1,821</b>	<b>1,707</b>	<b>1,747</b>	<b>4.2</b>	<b>(2.7)</b>	<b>(2.3)</b>
Diesel	760	717	801	723	745	6.0	(5.1)	(3.0)
Gasoline	396	392	416	391	422	1.0	(4.8)	(7.3)
Jet Fuel	110	106	105	108	103	3.8	4.8	4.9
Naphtha	70	70	74	68	68	-	(5.4)	-
Fuel Oil	24	25	31	29	32	(4.0)	(22.6)	(9.4)
Liquefied Petroleum Gas (LPG)	226	219	215	215	207	3.2	5.1	3.9
Others	185	171	179	173	170	8.2	3.4	1.8
<b>Total production volume (Mbpd)</b>	<b>1,818</b>	<b>1,744</b>	<b>1,829</b>	<b>1,772</b>	<b>1,763</b>	<b>4.2</b>	<b>(0.6)</b>	<b>0.5</b>
Diesel	723	702	749	708	709	3.0	(3.5)	(0.1)
Gasoline	438	417	424	415	398	5.0	3.3	4.3
Jet Fuel	83	83	82	86	83	-	1.2	3.6
Naphtha	77	67	71	74	70	14.9	8.5	5.7
Fuel Oil	185	180	185	190	208	2.8	-	(8.7)
Liquefied Petroleum Gas (LPG)	124	118	130	121	123	5.1	(4.6)	(1.6)
Others	188	177	188	178	172	6.2	-	3.5

## Other operating information

Mbpd	3Q24	2Q24	3Q23	9M24	9M23	Variation (%)		
						3Q24 X 2Q24	3Q24 X 3Q23	9M24 X 9M23
Reference feedstock	1,813	1,813	1,813	1,813	1,835	-	-	(1.2)
Total distillation feedstock	1,727	1,642	1,736	1,680	1,671	5.2	(0.5)	0.5
Total refining plants utilization factor (*)	95%	91%	96%	93%	91%	4.0	(1.0)	2.0
Fresh processed feedstock	1,705	1,616	1,706	1,650	1,637	5.5	(0.1)	0.8
NGL processed feedstock	46	47	48	47	48	(2.1)	(4.2)	(2.1)
Domestic crude oil as % of total processed feedstock (*)	92%	91%	91%	91%	91%	1.0	1.0	-
Pre-salt crude oil as % of total processed feedstock (*)	73%	69%	65%	70%	65%	4.0	8.0	5.0

(\*) Variations in percentage points.



## Sales

Sales volume of oil products in 3Q24 was 4.2% higher than 2Q24, with diesel, gasoline, jet fuel, LPG and asphalt standing out.

Diesel sales increased 6.0% in 3Q24 due to the demand seasonality in this quarter, as a consequence of the Summer Grain Crop planting and higher industrial activity.

Gasoline sales in 3Q24 were 1.0% higher than 2Q24, mainly due to the increased competitiveness of gasoline over hydrated ethanol in the supply of flex-fuel vehicles.

The 3.8% increase in jet fuel sales in 3Q24, compared to 2Q24, reflects seasonal demand increases in the sector, driven by the vacation period and greater economic activity.

LPG sales were 3.2% higher due to greater activity in the manufacturing industry in 3Q24 and lower average temperatures in the country's main consumer centers during this period.

In addition, we sold 816.7 thousand tons of asphalt in 3Q24, the best quarterly result since 2014.

## Production

Production of oil products in 3Q24 increased by 4.2% when compared to 2Q24. The combined production of diesel, gasoline and jet fuel in 3Q24 reached 68% of the total volume, in line with 2Q24. This result confirms the high efficiency and performance of refining facilities.

We recorded monthly and quarterly production records in 3Q24, in particular 71 Mbd of S-10 diesel at RPBC in September, and a quarterly average of 48 Mbd at REGAP. We also achieved quarterly records in gasoline production at REPAR of 61 Mbd and at RECAP of 22 Mbd. Asphalt production was also significant, with the highest monthly production since 2011 (32,000 tons) at REDUC and since 2014 (82,000 tons) at REGAP, as well as a quarterly production record (143,000 tons) at REPAR.

These achievements results from investments in modernization of the units, reliability of the assets, optimization of processes and the application of innovative technologies.



**We continued on our path to greater energy efficiency in the refining facilities with the RefTOP Program (World Class Refining). The projects and optimization initiatives of this program helped us reach 101.0 in Energy Intensity in 3Q24, the best result in history, 2.1 points lower than 2Q24. In September, we highlight the 92.2 figure at REPLAN, the best monthly result ever for this refinery. For information on Greenhouse Gas Emission Intensity, see the "Atmospheric Emissions" section.**



**Solid progress in the Midwest region, with a 127% increase in diesel and gasoline sales in September at the new Rio Verde and Rondonópolis hubs.**





The share of S10 diesel sales represented 64.4% of the total diesel sold by Petrobras, surpassing the previous record of 63.9%, achieved in 2Q24. S-10 diesel is becoming increasingly important in the company's product portfolio, with its low sulphur content and better environmental results.

***“With this quarter results, we demonstrate Petrobras' commitment to efficiency and profitability in our operations. The milestones were achieved due to the integrated efforts of the entire company.”***

*William França, Executive Officer for Industrial Processes and Products*

***“We are contributing to the growth of our customers in domestic market by acting competitively and safely, always preserving profitability and financial sustainability.”***

*Claudio Schlosser, Executive Officer for Logistics, Commercialization and Markets.*



## Gas & Low Carbon Energies

	3Q24	2Q24	3Q23	9M24	9M23	Variation (%)		
						3Q24 X 2Q24	3Q24 X 3Q23	9M24 X 9M23
<b>Natural Gas (MM m<sup>3</sup>/day)</b>								
Sales volume of natural gas	50	44	48	47	49	13.6	4.2	(4.1)
<b>Natural Gas Supply</b>								
National gas delivery	31	29	35	30	34	6.9	(11.4)	(11.8)
Regasification of liquefied natural gas	6	3	1	4	1	100.0	500.0	300.0
Import of natural gas from Bolivia	13	13	13	14	16	-	-	(12.5)
<b>Power (average MW) (1)</b>								
Sale of Thermal Availability at Auction	1,135	1,186	1,655	1,169	1,655	(4.3)	(31.4)	(29.4)
Sale of electricity (2)	1,075	418	450	647	520	157.2	138.9	24.4

(1) For the current period, the figures for the Energy segment are subject to possible changes once the final report from the Electricity Trading Chamber (CCEE) is issued.

(2) Adjustment to electricity sales data in 9M23.

In 3Q24, the sale of natural gas was approximately 6 million m<sup>3</sup>/day higher than 2Q24, due to the higher dispatch of natural gas for thermal power generation. On the supply side, the growth in 3Q24 was supported by higher domestic gas production due to fewer interventions, as well as increased LNG imports.

The sale of generated electricity in 3Q24 grew approximately 157% compared to 2Q24, due to declining hydrological reservoir inflows and the demand for higher dispatch of thermal power during peak energy consumption hours, offset by inconsistency of renewable energy generation.



**On September 9th, we achieved the industrial operation authorization for our largest Natural Gas Processing Unit (UPGN) in the Boaventura Complex, which will receive and process pre-salt gas through the Rota 3 pipeline. This will allow Petrobras to increase its gas supply.**



**Furthermore, we have already noticed results of implementing the performance-based pricing incentive program, which allowed customers to get better prices for gas according to their consumption, maintaining Petrobras' competitiveness within Brazil's new dynamic market environment.**



*"The materialization of the Rota 3 project, now the Boaventura Energy Complex, will make it possible to expand the supply of gas supply to the domestic market and reduce dependency on imports, thereby enhancing Petrobras' competitiveness."*

*"It is a Petrobras objective to provide reliable and competitive services in the gas and energy markets, contributing effectively to the industry and country's energy transition by emitting less CO2."*

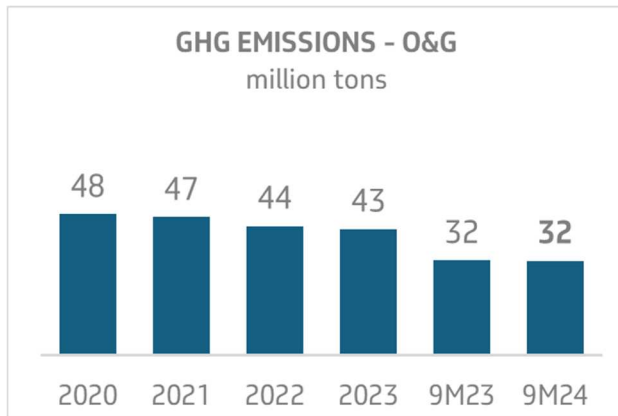
*Maurício Tolmasquim, Executive Officer for Energy Transition and Sustainability*



## Atmospheric Emissions

The monitoring of greenhouse gas (GHG) emissions indicators encourages the adoption of practices, and the development of projects related to reducing the Company's GHG emissions, in line with the climate commitments disclosed in Petrobras 2024-2028+ Strategic Plan., which aim to maximize value creation in face of the risks and opportunities linked to the just transition to a low carbon economy.

### Operational GHG emissions from oil and gas activities



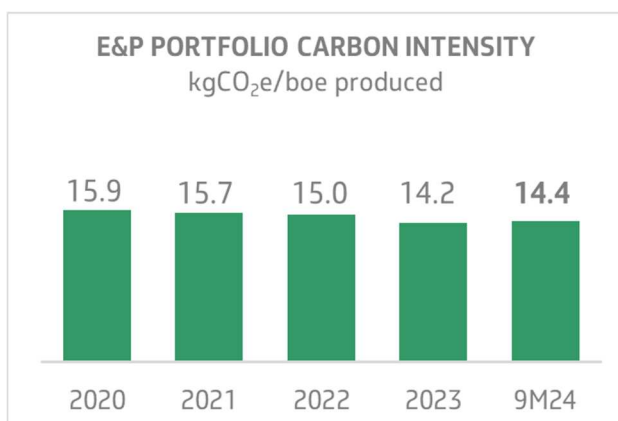
Among the emission indicators monitored by Petrobras, the GHG emissions - O&G indicator measures operational emissions from oil and gas activities as an independent outcome, i.e. not including emissions from operations in the thermoelectricity market, which are heavily affected by thermoelectric dispatches requested by ONS (National Electric System Operator).

The GHG - O&G emissions in 3Q24 was 32 million tons, in line to 3Q23. This result is explained by initiatives in both Exploration & Production (E&P) and Refining. In E&P, the increase in emissions associated with the

commissioning of the FPSO Sepetiba was offset by mitigation measures implemented and unplanned shutdowns of post-salt production systems. Mitigation measures include optimizing the operation of turbo generators and the implementation of Flaring Gas Recovery Units (FGRUs), which partially recover the gas stream meant to go to the flare and return it to the process plant. In Refining, energy efficiency measures and equipment maintenance are highlighted, contributing to increased operational efficiency.

### Greenhouse Gas Emissions Intensity (GHGI)

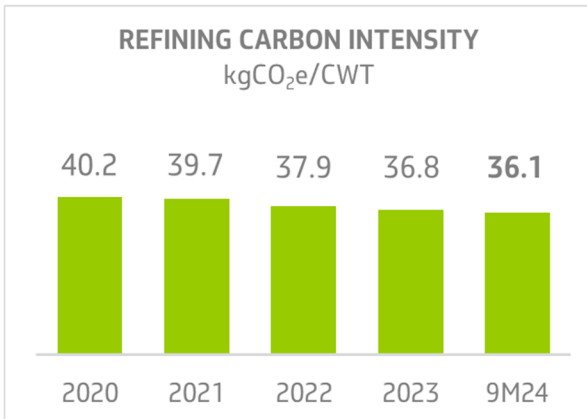
#### E&P



The 3Q24 results represent an increase of 0.2 kgCO<sub>2</sub>e/boe produced when compared to 2023, mainly driven by the commissioning of the FPSO Sepetiba. However, this increase in emissions was offset by the decarbonization actions implemented, such as optimizing the operation of turbo generators and implementation of FGRUs (Flaring Gas Recovery Units).

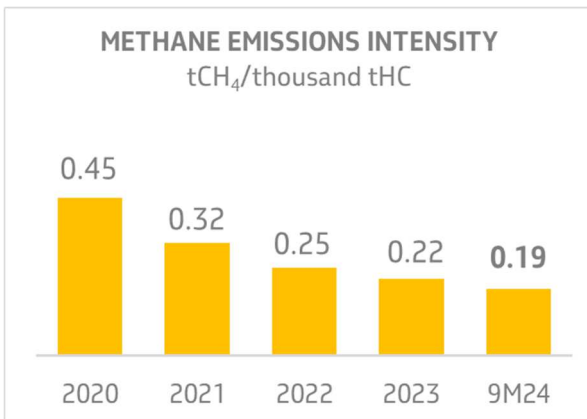


### Refining



The results in 3Q24 were 0.7 kgCO<sub>2</sub>e/CWT lower than 2023, reinforcing the downward trend observed since 2020, due to energy efficiency measures implemented and equipment maintenance, which supported a higher efficiency. We highlight that in September, the Refining sector achieved its best monthly historical result for IGEE, reaching 35.3 kgCO<sub>2</sub>e/CWT.

### Greenhouse Gas Emissions Intensity – Methane



The carbon intensity targets for Petrobras' segments include all greenhouse gases, including methane, which has a specific metric due to its high warming potential in the short term.

The 3Q24 results for E&P were 0.03 tCH<sub>4</sub>/thousand tHC lower than 2023. Measures to mitigate gas losses, such as the implementation of FGRUs (Flaring Gas Recovery Units), contributed to this outcome.



# Exhibits

## EXHIBIT I - CONSOLIDATED SALES VOLUME

Sales volume (Mbpd)	3Q24	2Q24	3Q23	9M24	9M23	Variation (%)		
						3Q24 X 2Q24	3Q24 X 3Q23	9M24 X 9M23
Diesel	760	717	801	723	745	6.0	(5.1)	(3.0)
Gasoline	396	392	416	391	422	1.0	(4.8)	(7.3)
Jet Fuel	110	106	105	108	103	3.8	4.8	4.9
Naphtha	70	70	74	68	68	-	(5.4)	-
Fuel oil	24	25	31	29	32	(4.0)	(22.6)	(9.4)
LPG	226	219	215	215	207	3.2	5.1	3.9
Others	185	171	179	173	170	8.2	3.4	1.8
<b>Oil products</b>	<b>1,771</b>	<b>1,700</b>	<b>1,821</b>	<b>1,707</b>	<b>1,747</b>	<b>4.2</b>	<b>(2.7)</b>	<b>(2.3)</b>
Renewable, nitrogenous and others	8	6	4	6	4	33.3	100.0	50.0
Petroleum	150	141	161	151	181	6.4	(6.8)	(16.6)
Natural gas	209	195	222	206	225	7.2	(5.9)	(8.4)
<b>Total domestic market</b>	<b>2,138</b>	<b>2,042</b>	<b>2,208</b>	<b>2,070</b>	<b>2,157</b>	<b>4.7</b>	<b>(3.2)</b>	<b>(4.0)</b>
Exports of petroleum, oil products and others	804	851	824	834	780	(5.5)	(2.4)	6.9
Sales abroad	29	44	37	38	48	(34.1)	(21.6)	(20.8)
<b>Total external market</b>	<b>833</b>	<b>895</b>	<b>861</b>	<b>872</b>	<b>828</b>	<b>(6.9)</b>	<b>(3.3)</b>	<b>5.3</b>
<b>Grand total</b>	<b>2,971</b>	<b>2,937</b>	<b>3,069</b>	<b>2,942</b>	<b>2,985</b>	<b>1.2</b>	<b>(3.2)</b>	<b>(1.4)</b>

## EXHIBIT II - NET IMPORTS AND EXPORTS

Thousand barrels per day (Mbpd)	3Q24	2Q24	3Q23	9M24	9M23	Variation (%)		
						3Q24 X 2Q24	3Q24 X 3Q23	9M24 X 9M23
<b>Net export (import)</b>	<b>494</b>	<b>547</b>	<b>529</b>	<b>514</b>	<b>440</b>	<b>(9.7)</b>	<b>(6.6)</b>	<b>16.8</b>
<b>Import</b>	<b>310</b>	<b>304</b>	<b>294</b>	<b>320</b>	<b>339</b>	<b>2.0</b>	<b>5.4</b>	<b>(5.6)</b>
Petroleum	149	168	152	161	161	(11.3)	(2.0)	-
Diesel	81	37	46	68	70	118.9	76.1	(2.9)
Gasoline	-	11	41	12	44	-	-	(72.7)



Naphtha	-	-	-	-	-	-	-	-
GLP	62	70	39	62	46	(11.4)	59.0	34.8
Other oil products	18	18	16	17	18	-	12.5	(5.6)
<b>Export</b>	<b>804</b>	<b>851</b>	<b>824</b>	<b>834</b>	<b>780</b>	<b>(5.5)</b>	<b>(2.3)</b>	<b>7.1</b>
Petroleum	598	651	599	633	581	(8.1)	(0.2)	9.0
Fuel oil	161	137	171	154	160	17.5	(5.8)	(3.8)
Other oil products	45	63	53	47	38	(28.6)	(15.1)	23.7

In 3Q24, diesel imports increased due to higher market demand, while there was no need for gasoline imports, due to increased domestic production. With regard to exports, in 3Q24, oil sales were 8% lower when compared to 2Q24, primarily due to higher levels of oil processing. On the other hand, fuel oil exports increased, following the completion of exports initiated in 2Q24.

In 3Q24, there was a slight reduction in oil exports to China, with volumes re-routed mainly to other Asian markets such as Korea and India. Europe remained the second largest market, accounting for approximately one-third of total exports during the period.

#### EXHIBIT III - OIL EXPORTS (\*)

Country	3Q24	2Q24	3Q23
China	41%	50%	40%
Europe	32%	30%	32%
Latam	7%	5%	13%
USA	6%	5%	7%
Asia (Ex China)	14%	9%	7%
Caribbean	0%	1%	1%

#### EXHIBIT IV - OIL PRODUCTS EXPORTS (\*)

Country	3Q24	2Q24	3Q23
Singapore	47%	40%	38%
USA	47%	50%	44%
Others	6%	10%	18%

(\*) Refers to exports according to the criteria of physical shipment from Brazilian coast.



# Glossary

## A

**ANEEL:** The Agência Nacional de Energia Elétrica (Brazilian Electricity Regulatory Agency).

**Associated Gas Utilization Index (IUGA):** percentage of the volume of associated gas used in relation to the total volume of associated gas produced.

## D

**Diesel-R:** is an S-10 diesel with renewable content, an advanced biofuel. Diesel-R is produced from coprocessing of conventional diesel and vegetable oils using our proprietary HBIO™ technology. The renewable part of the resulting fuel (Hydrotreated Vegetable Oil or "HVO") has the same structure as conventional diesel oil and reduces greenhouse gas emissions when compared to mineral diesel oil.

**Diesel S-10:** is a medium oil product with a low sulphur content (10 ppm) used as fuel in vehicles with compression-ignites internal combustion engines (diesel cycle engines).

## E

**Exploration & Production (E&P):** The segment covers the exploration, development and production of crude oil, NGL and natural gas in Brazil and overseas, mainly aiming to supply our domestic refineries. This segment also operates through joint ventures with other companies, including interests in foreign companies.

**E&P Carbon Intensity:** GHG emissions, in terms of CO<sub>2e</sub>, from E&P activities in relation to the total operated oil and gas production (wellhead) recorded in the same period. Scope 1 and 2 GHG emissions are considered. This indicator represents the rate of greenhouse gas emissions per unit of barrel of oil equivalent produced and is used to analyze the carbon performance of the assets in our current and future portfolio.

## F

**Fresh processed feedstock:** the volume of oil processed in the distillation units, consisting of oil and C5+.

**FGRU:** Flare Gas Recovery Unit (FGRU). It allows this gas to be returned for processing in the unit, avoiding its burning and the consequent emission of greenhouse gases.

## G

**Gas & Low Carbon Energy (G&LCE):** The segment covers the logistics and commercialization of natural gas and electricity, the transportation and commercialization of LNG, the generation of electricity through thermoelectric plants, as well as the processing of natural gas. It also includes renewable energy businesses, low carbon services (carbon capture, utilization and storage) and the production of biodiesel and its products.

**GHG Emissions Intensity in E&P:** GHG emissions, in terms of CO<sub>2e</sub>, from E&P activities in relation to total operated oil and gas production (wellhead) recorded in the same period. Scope 1 and 2 GHG emissions are taken into account. This indicator represents the rate of GHG emissions per barrel of oil equivalent produced. It covers oil and gas exploration and production activities under operational control and is used to analyze the carbon performance of the assets in our current and future portfolio.





**GHG Emissions Intensity in Refining:** GHG Emissions Intensity in the Refinery. GHG emissions, in terms of CO<sub>2</sub>e, from refining activities in relation to the unit of activity called Complexity Weighted Tonne ("CWT"). CWT represents a measure of activity, similar to UEDC (Utilized Equivalent Distillation Capacity), which considers the potential for GHG emissions, equivalent to distillation, per process unit, allowing for better comparability between refineries of different complexities. This indicator covers refining activities with operational control and makes up the analysis of the carbon performance of the assets in our current and future portfolio.

## L

**LNG regasification:** operational volume of LNG that has been regasified and made available by Petrobras to the market at the exit of the LNG terminals, converted to the reference PCS of 9400 kcal/m<sup>3</sup>. Volumes that have been transferred from methane ships to regasification ships but have not yet been regasified are not included in this measure.

## M

**Mboed:** Thousand barrels of oil equivalent per day

**Mbpd:** Thousand barrels per day

**Methane Emissions Intensity:** The indicator uses the IOGP metric, which represents the ratio between methane emissions and total operated hydrocarbon production.

## N

**National gas delivery:** operational volume of processed natural gas (dry), of national origin (onshore or offshore), made available by Petrobras to the market at the exit of the natural gas processing units, converted to the reference PCS of 9400 kcal/m<sup>3</sup>. It includes both gas from Petrobras' own production and gas purchased from partners. It does not include the volumes of gas belonging to agents who directly contract the processing service at the units.

**NGL:** Natural Gas Liquids, the liquid resulting from the processing of natural gas and containing the heaviest gaseous hydrocarbons.

**NGL processed feedstock:** the volume of NGL processed in refining units.

## R

**Reference feedstock:** maximum sustainable feedstock of oil reached in the distillation units at the end of the period, respecting the design limits of the equipment and the requirements of safety, the environment and product quality. It is less than the capacity authorized by the ANP (including temporary authorizations) and environmental agencies.

**Refining Carbon Intensity:** GHG emissions, in terms of CO<sub>2</sub>e, from Refining activities in relation to the unit of activity called CWT (Complexity Weighted Tonne). The CWT represents a measure of activity, which takes into account both the effect of the load processed and the complexity of each refinery, allowing the potential for GHG emissions to be compared between refineries with different profiles and sizes. This indicator makes up the analysis of the carbon performance of the assets in our current and future portfolio.

**Refining, Transportation and Marketing (RTM):** The segment covers refining, logistics, transportation, acquisition and export of crude oil, as well as trading in oil products in Brazil and abroad. This segment also includes petrochemical operations (involving interests in petrochemical companies in Brazil) and fertilizer production.

**S**

**Sale of Thermal Availability at Auction (average MW):** the volume that the thermoelectric generating agent undertakes to make available to the electricity system to meet the plant's eventual needs, i.e. regardless of its effective generation. In contracts for the Commercialization of Energy in the Regulated Environment by Availability, the generating agent receives a fixed portion, associated with the capacity made available to the electrical system, and a variable portion, associated with the effective generation of energy from the plant.

**Summer Grain Crop:** agricultural crops that thrive best in conditions of high temperatures and greater water availability. In Brazil, this usually involves planting in the months of September to December, with harvesting taking place mainly in the months of January to April. The main crops of this season include soybeans, corn, rice, beans and cotton, and are crucial to the agricultural economy due to their influence on domestic supply and exports.

**T**

**Thermal Carbon Intensity:** GHG emissions, in terms of CO<sub>2e</sub>, from the processes of Thermal Power Plants in relation to the electricity generated. Scope 1 and 2 GHG emissions are considered. This indicator makes up the analysis of the carbon performance of the assets in our current and future portfolio.

**Total commercial production:** Production of oil, NGL and commercial natural gas (excluding the volume of natural gas reinjected and not marketed).

**Total distillation feedstock:** the feedstock of distillation units, consisting of oil, C5+, residues and reprocessing, including terminals.

**Total operated production:** Production from a gas or oil field, including Petrobras' interest and the interest of partners.

**Total production:** Production of oil, NGL and natural gas (takes into account the volume of natural gas reinjected and not sold).

**Total utilization factor of the refining park:** percentage utilization of the refining park in relation to its reference feedstock. It takes into account all the cargo in the distillation units, consisting of oil, C5+, residues, reprocessing, including terminals.

**Tupi Asset:** includes the area of the Tupi Shared Reservoir and the Iracema Area.



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