

2023 Results second quarter

OUTSTANDING RESULTS IN A CHALLENGING MARKET



Generating Value through TESG



SOCIAL INVESTMENT

Estimated 2023

COP 766
Billion



TRANSFERS TO THE NATION

COP 23.6
Trillion for 1H23



ADVANCES IN REDUCTION OF GHG'S*

*(Greenhouse gas emissions)

-1.09 MtCO₂e
At 1H23

Closing of the negotiation of the Collective Bargaining Agreement 2023-2026



Cutting-Edge Knowledge



BENEFITS CAPTURE by COP 1.1 Trillion during 1H23

DIGITAL TRANSFORMATION

- Pilot tests of 5G technology for industrial use at the Barrancabermeja Refinery
- In 2023 the Econova Network was impacting over 370 companies, providing seed capital for close to 20 ventures, and supporting 10 companies through its business accelerator program

PLACE #1 in Corporate Responsibility Business Monitor

Competitive Returns

COP Trillion



The EBITDA and Net Profit for the first semester of 2023 are the second best reported in history for this period

Grow with the Energy Transition

Low-Emission Solutions Natural Gas and LPG

Contributed 22.0% of the total production of hydrocarbons*

*Figures includes gas and Liquefied Petroleum Gas (LPG) and excludes LNG (Liquefied Natural Gas)

Ecopetrol Group Investments

Record of the last 7 years with an investment of 12.3 Trillion in the 1H23

Hydrocarbons

Refining
428 mbd

Historical quarterly record high in combined throughput

Production
728 mboed

(+23.4 vs 2Q22)

Transported Volumes
1,097.7 mbd

(+20.3 vs 2Q22)

Highest quarterly production in the last 3 years

Transmission and Toll Roads

Awarded

2 lots auctioned by Brazil's National Electric Energy Agency (ANEEL)

16% Contribution to Ecopetrol Group EBITDA

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Thanks to the efforts of our world-class team, it is an honor to present the operating and financial results of the Ecopetrol Group for 2Q23. I would like to highlight not only our resilience and competitiveness, but also the excellent operational and

financial performance across all our business lines within a challenging market environment, as well as our firm commitment to financial sustainability and value creation for all our stakeholders.

In Colombia, from the production fields in the Llanos Orientales to the offshore stations in the Caribbean, and globally, from our transmission and toll roads business line in Chile to our trading company in Singapore, we continue to steadfastly focus on operational excellence, innovation, and a firm commitment to a just energy transition, within the framework of our 2040 Strategy “Energy that Transforms”.

In terms of the market, during the first half of the year, several factors impacted the price of crude oil, including the possibility of a recession in the developed world, high interest rates and banking pressures in the United States, and the economic slowdown in China. However, our operational resilience and the strategies we have implemented to take advantage of opportunities through market diversification and efficiency and synergy throughout our operations have allowed us to successfully face these trials.

Some of the most significant operational milestones reached in 2Q23 include: i) record production of the last three years (728.0 mboed), driven by fields such as Permian, Caño Sur and Rubiales; ii) record in combined throughput of 428 mbd in refineries and iii) the closing of the negotiation of the 2023-2026 Collective Bargaining Agreement, among others. Regarding financial milestones, the following are noteworthy: i) Progress in reducing the account receivable from the Fuel Price Stabilization Fund-FEPC- During the quarter, COP 8.4 trillion were offset and the lowest average accumulation since January 2022 was registered. ii) execution of CAPEX for 6.3 trillion (1H23 execution reached COP 12.3 trillion; half-yearly record of the last 7 years and iii) transfers to the Nation for COP 18 trillion, for a total of COP 23.6 trillion in 1H23.

Along with the outstanding operational performance, Ecopetrol reported outstanding financial indicators. Revenues of COP 34.3 trillion, net income of COP 4.1 trillion, EBITDA of COP 14.6 trillion, and an EBITDA margin of 42.5% were recorded in 2Q23.

For the year-to-date, we reported consolidated revenues of COP 73.2 trillion, net income of COP 9.7 trillion, EBITDA of COP 32.4 trillion, and an EBITDA margin of 44.3%. At the end of June, the gross debt/EBITDA indicator was 1.6 times and the return on capital employed (ROACE) was 14.8%.

It's important to highlight that the EBITDA and Net Profit for the first semester of 2023 are the second best reported in history for this period, which has enabled the payment of COP 11.3¹ trillion in taxes to the Nation, including nearly COP 2.2 trillion of incremental pesos associated with the increased taxation resulting from the tax reform effective since January 2023.

Our **Hydrocarbons** business line has achieved excellent operating performance, supported by an increase in production, record refinery throughput and availability, as well as an increase in volumes transported as compared to 2Q22. By the end of June, ten exploratory wells had been drilled, 40% ahead of the target established for the year. In 2Q23, success was reported in the Tinamú-1 exploratory well in Castilla la Nueva in the Department of Meta, where heavy crude oil was found. Regarding offshore exploration activity in Colombia, advances in the evaluation of the Gorgon-2 well and the drilling of the Glaucus-1 well in the same area are noteworthy. The latter is expected to reach maximum depth in the second half of 2023. In addition, pre-drilling activities are underway for the Orca Norte-1 well and planning has begun for the appraisal campaign of the Uchuva.

In terms of **production**, we reached an average of 728.0 mboed in the quarter, an increase of 23.4 mboed compared to 2Q22. The contribution and incremental production in the Caño Sur and Rubiales fields in Colombia and Permian in the United States are worth noting. This allowed us to offset the impact of the physical security situations and blockades caused by third parties that occurred during this period. Likewise, we continued making headway in our decarbonization initiatives, recording a total reduction of 141 thousand TCO₂ equivalent for the first half of 2023.

In the **Midstream** segment, total volumes transported increased by 20.3 mbd compared to 2Q22 for a total of 1,098 mbd, primarily explained by greater production availability at the refineries and higher hydrocarbon production in the Llanos

¹ Included in the COP 23.6 trillion of transfers to the Nation.

area. The above was achieved, despite the damage caused by third parties that were addressed by means of seven reversal cycles of the Bicentenario pipeline in 2Q23 and ten reversal cycles in 1H23.

The **Downstream** segment reached an historical quarterly record high in combined throughput of 428 mbd, supported by the continuous operation of the Cartagena Crude Oil Plant Interconnection Project (IPCC) and an operational availability above 96%. As a result, we were able to maintain a double-digit integrated refining gross margin (14.4 USD/BI), despite the weakening of refined product prices.

On the **commercial** front, our subsidiary Ecopetrol Trading Asia stands out, having successfully sold more than 85 million barrels of crude oil in the Asian market to date, exceeding our initial goal set in 2021 by 15% and representing 54% of our exports in 2Q23. Likewise, the subsidiary has contributed USD 62.5 million to the Group's EBITDA in 2Q23

During 2Q23, the Carbon Trading desk offset close to 35 thousand tons of CO₂ through carbon credits from a Natural Climate Solutions project in Colombia. It also continues to position Castilla Blend carbon-neutral crude through the sale of cargoes to the US and Europe that represent an approximate offset of 16 thousand and 33 thousand tons of CO₂e, respectively.

In the **Low-emission Solutions business** line, which includes, among others, the natural gas, LPG, hydrogen, and renewable energy businesses, it is worth noting that natural gas and LPG accounted for 22.0% of the Group's total hydrocarbon production during 2Q23. In renewables, our Brisas, Castilla, and San Fernando solar farms, in addition to the Cantayús Small Hydroelectric Plant, reduced 12,300 tons of CO₂ equivalent and generated savings of close to COP 13,553 million by the end of 2Q23.

On the **hydrogen** front, both of our refineries' industrial green hydrogen production projects were selected for the British Government's Climate Finance Accelerator program as initiatives that have a significant climate impact and alignment with national emission reduction strategies. These projects are progressing in their technical and financial maturity in partnership with our collaborators. In terms of mobility, with the support of CENIT and H2B2, the first hydrogen supply was delivered to the SITP bus in Bogotá for commissioning tests, the bus is expected to be operational on the city streets in 4Q23. Furthermore, in June we held the Energy Transition Forum where, for 3 days, domestic and international

experts participated in sharing knowledge on this topic, which is at the core of our 2040 Strategy.

The **Transmission and Toll Roads** business line's operating and financial results remained positive. Contributions from ISA amounted to 16% of the Group's EBITDA in the first half of 2023. During the same period, ISA's first half revenues reached COP 7.5 trillion, while EBITDA amounted to COP 5.1 trillion. During 2Q23 ISA was also awarded six expansions in Brazil and one connection in Colombia. Furthermore, ISA, through ISA CTEEP, emerged as the winner in two lots auctioned by Brazil's National Electric Energy Agency (ANEEL).

In terms of **TESG** results, the following are worth highlighting:

In the **environmental dimension** in 2Q23, Ecopetrol implemented comprehensive water management practices, reusing 38.4 million cubic meters of water in its operations thus reducing pressure on water resources. Furthermore, the company was able to avoid the emission of 183,695 tCO₂e during 1H23, achieving 45% of the planned reduction for the entire year.

In the **social dimension**, we successfully concluded the negotiation of a new Collective Bargaining Agreement with 13 labor unions. The commitment, dedication, and professionalism of the negotiating teams were outstanding. In addition, the Ecopetrol Group remains steadfast in its commitment to the sustainable development of the territory, contributing resources and benefiting various sectors such as education, sports, health, as well as rural development and access to public services to close social gaps. At the end of 2Q23, COP 170,580 million were allocated for the execution of the Territorial Development Portfolio, which encompasses strategic and obligatory social, environmental, and relationship investments.

Among social investments, contributions to improve access to essential public services such as natural gas, water, and energy are also noteworthy. Our Social Gas Program allowed the certification of 4,843² new gas connections for households in the departments of Atlántico, Santander, and Casanare. In terms of access to water, the contribution of COP 6.5 billion for the construction of a water well in La Guajira stands out and, on the energy front, we participated alongside the National Government in a task force led by the Ministry of Mines and Energy, to consolidate a portfolio of initiatives with the potential to become energy communities.

² Correspond to physical connections.

Furthermore, in 2Q23 we conducted 13 social dialogue processes, with the participation of 1,100 people nationwide including Community Action Boards, academia, businessmen, and local institutions, fostering trust with the communities in our areas of influence.

During the 1H23 benefits of USD 238 million (COP 1.1 trillion) were captured through the **innovation and technology** agenda. Close to 30% of the benefits were focused on digital transformation, highlighting the pilot tests of 5G technology for industrial use at the Barrancabermeja Refinery with the support of the Ministry of Information and Communication Technologies (MinTIC) and Claro Colombia. Also, video analytics were used to monitor restricted areas and the transfer of data to obtain test results in real time. On the research and technological development front, we were able to capture benefits for USD 164.8 million (COP 0.8 trillion) by the end of 1H23, highlighting an integrated water management model that considers the hydrogeology of the Mid Magdalena Valley and the potential of the deepest groundwater units.

In terms of **corporate governance**, Ecopetrol completed the first phase for the implementation of

the human rights risk management cycle (HRRM) with the Orinoco Regional and Eastern Andean Regional Vice Presidencies. In addition, during 2Q23, the annual training program for the Board of Directors of Ecopetrol S.A. began, to promote best practices in corporate governance, energy transition, and TESG, among others.

Finally, I would like to reiterate my commitment to the Ecopetrol Group's 2040 Strategy. We are currently working with the Board of Directors to strengthen this roadmap, maintaining excellent operational and financial performance, ensure the safety of our operations, and contribute to social development. This will be supported by solid corporate governance and transparency. We will continue to strengthen our relationships with all our stakeholders, with a focus on generating sustainable value as we move forward on the path of a sustainable energy transition.

Ricardo Roa Barragán
President of Ecopetrol S.A

Bogotá D.C., August 8, 2023, Ecopetrol S.A. (BVC: ECOPETROL; NYSE: EC) announced today the Ecopetrol Group's financial results for the second quarter and cumulative year to date for 2023, prepared in accordance with International Financial Reporting Standards in Colombia.

The first semester of 2023 ranks as the second-best financial result in the history of The Ecopetrol Group for the same period, achieving an EBITDA generation level of COP 32.4 trillion and a Net Profit of COP 9.7 trillion (COP 12.0 trillion before Tax Reform). This achievement is supported by excellent operational performance that helped mitigate the impact of price reductions and the rise in fiscal contributions associated with the Tax Reform

Table 1: Financial Summary Income Statement – Ecopetrol Group

Billion (COP)	2Q 2023	2Q 2022	Δ (\$)	Δ (%)	6M 2023	6M 2022	Δ (\$)	Δ (%)
Total sales	34,300	43,885	(9,585)	(21.8%)	73,154	76,358	(3,204)	(4.2%)
Depreciation and amortization	3,239	2,725	514	18.9%	6,248	5,305	943	17.8%
Variable cost	13,718	16,343	(2,625)	(16.1%)	29,065	28,408	657	2.3%
Fixed cost	4,530	4,010	520	13.0%	8,952	7,303	1,649	22.6%
Cost of sales	21,487	23,078	(1,591)	(6.9%)	44,265	41,016	3,249	7.9%
Gross income	12,813	20,807	(7,994)	(38.4%)	28,889	35,342	(6,453)	(18.3%)
Operating and exploratory expenses	2,314	2,199	115	5.2%	4,670	4,205	465	11.1%
Operating income	10,499	18,608	(8,109)	(43.6%)	24,219	31,137	(6,918)	(22.2%)
Financial income (loss), net	(2,044)	(1,991)	(53)	2.7%	(3,549)	(3,514)	(35)	1.0%
Share of profit of companies	155	237	(82)	(34.6%)	497	439	58	13.2%
Income before income tax	8,610	16,854	(8,244)	(48.9%)	21,167	28,062	(6,895)	(24.6%)
Income tax	(3,336)	(5,309)	1,973	(37.2%)	(8,929)	(9,193)	264	(2.9%)
Net income consolidated	5,274	11,545	(6,271)	(54.3%)	12,238	18,869	(6,631)	(35.1%)
Non-controlling interest	(1,187)	(1,075)	(112)	10.4%	(2,490)	(1,826)	(664)	36.4%
Net income attributable to owners of Ecopetrol before impairment	4,087	10,470	(6,383)	(61.0%)	9,748	17,043	(7,295)	(42.8%)
(Expense) recovery for impairment long-term assets	0	0	0	-	0	0	0	-
Deferred tax of impairment	0	0	0	-	0	0	0	-
Net income attributable to owners of Ecopetrol	4,087	10,470	(6,383)	(61.0%)	9,748	17,043	(7,295)	(42.8%)
EBITDA	14,585	22,211	(7,626)	(34.3%)	32,427	38,106	(5,679)	(14.9%)
EBITDA Margin	42.5%	50.6%	-	(8.1%)	44.3%	49.9%	-	(5.6%)

The financial information included in this report has not been audited and is expressed in billions or trillions of Colombian pesos (COP) or US dollars (USD), or thousands of barrels of oil equivalent per day (mboed) or tons, as noted. For presentation purposes, certain figures in this report were rounded to the nearest decimal place.

Forward-looking statements: This release contains statements that may be considered forward-looking statements concerning Ecopetrol's business, operational and financial results, and prospects for growth. These are forward-looking statements and, as such, are based solely on management's expectations regarding Ecopetrol's future and its ongoing access to capital to fund Ecopetrol's business plan. Such forward-looking statements depend primarily on changes in market conditions, government regulations, competitive pressures, the performance of the Colombian economy and the industry, to mention a few and therefore, they are subject to change without notice.

I. Financial and Operating Results

Sales Revenue

Cumulative sales revenues in the first half of 2023 decreased by 4.2% or COP -3.2 trillion relative to the same period in 2022, totaling COP 73.2 trillion, as a combined result of:

- A decrease of -24.6 USD/BI (COP -17.9 billion) in the weighted average sales price of crude oil, gas, and products, primarily due to the lower Brent reference price and, to a lesser extent, the deterioration of spreads against Brent for both crude oil and products.
- An increase in the average exchange rate, positively impacting revenues (COP +8.7 trillion).
- An increase in sales volume (COP +4.2 trillion, +53.9 mboed), mainly due to: i) realization of cargoes negotiated under the DAP (Delivery at Place) modality, which remained in transit at the end of December 2022; ii) increased production; and iii) rise in the exports of refined products, as a result of the greater operating capacity of the Cartagena Refinery.
- Higher service revenues, primarily from energy transmission and toll roads (COP +1.8 trillion).

Revenues decreased 21.8% in 2Q23 as compared to 2Q22, or COP -9.6 trillion, totaling COP 34.3 trillion, mainly attributed to:

- A decrease of -37.3 USD/BI (COP -13.3 trillion) in the weighted average sales price of crude oil, gas, and products, due to a lower Brent benchmark price and a weakening in the refined products spreads versus the Brent, particularly those of fuel products, which had reached record amounts in 2Q22.
- A rise in the average exchange rate, positively impacting revenues (COP +3.1 trillion).
- Higher service revenues (COP +0.4 trillion), due to the factors mentioned above.
- An increase in sales volumes (COP +0.2 trillion, +6.6 mboed), due to the net effect of: i) higher crude oil production; and ii) a decrease in domestic demand for fuel products.

Table 2: Sales Volumes – Ecopetrol Group

Local Sales Volume - mboed	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Medium Distillates	170.1	175.8	(3.2%)	170.5	170.2	0.2%
Gasoline	143.7	150.5	(4.5%)	147.7	150.2	(1.7%)
Natural Gas	88.9	98.3	(9.6%)	89.7	97.5	(8.0%)
Industrials and Petrochemicals	19.9	23.8	(16.4%)	21.1	23.3	(9.4%)
LPG and Propane	18.6	17.7	5.1%	18.8	18.2	3.3%
Crude Oil	2.6	2.4	8%	2.3	2.2	4.5%
Fuel Oil	0.2	0.1	100.0%	0.3	0.0	-
Total Local Volumes	444.0	468.6	(5.2%)	450.6	461.6	(2.4%)
Export Sales Volume - mboed	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Crude Oil	431.1	414.4	4.0%	436.3	405.5	7.6%
Products	113.3	103.5	9.5%	110.7	81.0	36.7%
Natural Gas*	9.6	4.9	95.9%	8.8	4.5	95.6%
Total Export Volumes	554.0	522.8	6.0%	555.7	491.0	13.2%
Total Sales Volumes	998.0	991.4	0.7%	1,006.3	952.6	5.6%

* Natural gas exports correspond to local sales of Ecopetrol América LLC and Ecopetrol Permian LLC

Total volume sold during 2Q23 amounted to 998 mboed, a year-on-year 0.7% increase, as a result of higher export volumes offsetting lower domestic sales volumes.

Sales in Colombia, which account for 44% of the total, decreased in volume by 5.2% (-24.6 mboed) versus 2Q22, mainly due to:

- A decrease of 4.5% (-6.8 mboed) in gasoline demand, explained by higher prices and wholesaler inventory consumption.

- A 3.2% drop (-5.7 mboed) in middle distillates sales, explained by: i) lower jet fuel consumption resulting from low-cost airlines going out of business; and ii) an atypical situation in 2022 that required addressing demand in the northern part of the country.
- A decrease of 16.4% (-3.9 mboed) in petrochemicals sales, explained by: i) lower sales of polyethylene and polypropylene due to lower demand.
- A 9.6% decline (-9.4 mboed) in gas sales explained by: i) lower demand from clients (mainly from the Industrial sector and in thermal generation), ii) external events that led to a suspension of gas deliveries from the Gibraltar Field for 19 days due to multiple attacks on the Caño Limón-Coveñas Oil Pipeline, iii) thermal anomaly event in the Mariquita Cali gas pipeline of TGI with demand restrictions for the western region of the country for 5 days.

International sales, which account for 56% of total sales, increased in volume by 6% (31.2 mboed) in 2Q23 versus 2T22, as a combined result of:

- A 4% rise (+16.7 mboed) in crude oil exports, mainly explained by: i) an increase in trading operations (+21.4 mboed), ii) higher production in Permian and iii) net cargoes in transit at the end of June (-12.4 mboed) whose primary destination is Asia.
- An increase of 9.5% (+9.8 mboed) in product exports due to greater product availability because of greater supply in the refineries (mainly due to the stabilization of the IPCC in Cartagena). In 2Q23, the refineries recorded a historical quarterly combined throughput of 428 mbd.
- Higher sales of LPG in the Permian (+5.9 mboed) due to a successful drilling campaign.
- An increase of 95.9% (+4.7 mboed) in local Natural Gas sales in Permian and Ecopetrol America subsidiaries, primarily attributed to the success of the Permian exploratory campaign.

Table 3: Average Realization Prices – Ecopetrol Group

USD/BI	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Brent	77.7	112.0	(30.6%)	79.9	104.9	(23.8%)
Natural Gas Basket	28.4	27.5	3.3%	29.0	27.3	6.2%
Crude Oil Basket	68.4	105.2	(35.0%)	68.8	97.0	(29.1%)
Products Basket	89.2	135.3	(34.1%)	94.4	122.8	(23.1%)

Crude: Crude oil basket prices decreased by 36.8 USD/BI in 2Q23 year-on-year, from 105.2 USD/BI to 68.4 USD/BI. Prices dropped primarily because of a weakening of the Brent price, resulting from an increase in US inventories, higher interest rates in the US and the UK, lower demand from China, and OPEC's decision to hold production levels unchanged. Despite this impact on prices, Castilla crude oil is positioned above its competitors. During 2Q23 the crude basket spread gradually recovered with the opening of the Chinese market and sales volumes continue to be negotiated in DAP (Delivered at Place) mode to various destinations such as China, India, Malaysia, Spain, and the Gulf Coast of the United States.

Refined Products: The product sales basket price decreased by 46.1 USD/BI in 2Q23 versus 2Q22, from 135.3 USD/BI to 89.2 USD/BI, driven by the weakening of Brent (-30%), coupled with lower international price indicators, particularly for diesel, jet fuel, and gasoline.

Natural Gas: Gas sales prices increased 0.8 USD/BI from 27.5 USD/BI to 28.4 USD/BI in 1Q23 versus 1Q22, mainly due to the indexation of contracts to the Producer Price Index (PPI).

Hedging Program: During 2Q23 the Company continued with the tactical hedging strategy for the active management of its price risks. During this period, the volumes of which amounted to 3.95 mmbbls. The following commercial operations had an associated tactical hedge: i) 3.0 mmbbls of crude oil exports; ii) 0.7 mmbbls of crude oil imports; and iii) 0.25 mmbbls of fuel oil exports. During the same period, ECPTA executed 14 hedging operations, 8.5 mmbbls on indicator, and 1.47 mmbbls on freight.

Cost of Sales

Cost of sales increased by 7.9%, or COP +3.2 trillion during the 1H23 versus the same period in 2022, and decreased by 6.9%, or COP -1.6 trillion in 2Q23 versus 2Q22. The most relevant events that occurred in each cost component are presented below:

Variable Costs

Variable costs for the 1H23 increased by 2.3% or COP +0.7 trillion relative to the first half of 2022, as a combined result of:

- A decrease in the purchase of crude oil, gas, and products (COP -4.5 trillion), due to the net effect of: i) lower weighted average price of domestic purchases and imports of -33.4 USD/BI (COP -8.0 trillion); ii) lower volume of purchased refined products (COP -4.8 trillion, -52.4 mboed), given the higher operational availability in both refineries; iii) an increase in volumes purchased of crude oil and gas (COP +4.6 trillion, +63.8 mboed), highlighting the increase in crude oil import requirements, resulting from additional operational capacity in the Cartagena Refinery; and iv) an higher average exchange rate in purchases (COP +3.7 billion).
- An increase in other variable costs (COP +0.7 trillion), owing to an increase in operational activity across all business segments, higher contract tariffs impacted by the inflationary effect, and a greater average inflationary and exchange rate impact on contract tariffs given the higher average exchange rates.
- Inventory fluctuations (COP +4.5 billion), due to: i) lower valuation due to lower benchmark prices of crude oil and products purchased; and ii) higher consumption owing to higher sales.
- Variable costs decreased by 16.1% or COP -2.6 trillion in 2Q23 compared to 2Q22, attributed to: i) lower crude, gas, and products purchases (COP -4.3 trillion), given a lower weighted average purchase price of -44.8 USD/BI, a decrease of -46.5 mboed in refined product purchases, an increase in purchases of crude oil and gas of +55.7 mboed and the higher average exchange rate; and ii) fluctuating inventories and increases in other variable costs (COP +1.7 trillion), in both cases due to the aforementioned factors occurring during the period.

Fixed Costs

Fixed costs increased by 22.6% or COP +1.6 trillion during the first half of 2023 year-on-year, and by 13.0% or COP +0.5 trillion in 2Q23 versus 2Q22, due to: i) higher maintenance costs, materials consumed, contracted services and other costs, resulting from an increase in productive operations; ii) inflationary and exchange rate effects; and iii) higher labor costs, primarily associated with higher salaries as compared to the previous year due to the effect of inflation.

Total Unit Cost

The Total Unit Cost for 1H23 was 45.6 USD/BI, showing a decrease of 14.7% compared to 1H22 (53.5 USD/BI), primarily explained by the impact of a higher exchange rate and increased traded volumes. The increase of +681 pesos per dollar during the period led to a reduction in operational costs and expenses close to COP 340 billion.

Depreciation and Amortization

Depreciation and amortization increased by 17.8% or COP +0.9 trillion in the first half of 2023 relative to the same period in 2022, and by 18.9% or COP +0.5 trillion in 2Q23 versus 2Q22, as a result of: i) increased production; ii) exchange rate effect on the depreciation of the Group's subsidiaries which use the USD as their functional currency, given the higher average exchange rate; and iii) higher capital investments. The above was partially offset by a higher level of reserves, which translates into a lower depreciation rate.

Operating Expenses, net of other income

Operating expenses, net of other income, increased by 11.1%, or COP +0.5 trillion during the first half of 2023 compared to that of 2022, and by 5.2%, or COP +0.1 trillion in 2Q23 year-on-year, primarily as a result of:

- An increase in customs operation expenses, mainly because of the higher sales volume under the DAP (Delivery at Place) modality.

- Greater contracted service costs as a result of higher inflation.
- Higher labor expenses, mainly due to salary increases, driven by inflation.
- A decrease in asset disposal expenses associated with the divestment of the Rydberg project in Ecopetrol America following the technical and economic feasibility analysis in 2022.

Financial Result (Non-Operating)

Financial expense (non-operating) net, increased by 1.0% in the first half of 2023 year-on-year and 2.7% in 2Q23 versus 2Q22, as a result of:

- An increase in financial costs, a higher average exchange rate, higher interest rates and higher debt levels, mainly associated with new commercial loans.
- The above has been offset by:
- Higher income from valuation and yields of the investment portfolio, resulting from an increase in market yield rates.
- Higher income from the exchange difference, because of a higher net liability position in USD of the Ecopetrol Group and the revaluation of the COP against the USD during 2023.

The **effective tax rate** for the first half of 2023 was 42.2% compared to 32.8% in 2022, while for 2Q23 it was 38.7% versus 31.5% in 2Q22. The increase in both periods is mainly due to the effect of the surtax and the non-deductibility of royalties, both of which were adopted in the latest tax reform. The above was partially offset by the lower rates of the subsidiaries under special taxation regimes, as is the case of the Cartagena Refinery and the subsidiaries in the United States.

Statement of Financial Position

The Ecopetrol Group's assets decreased by COP -19.3 trillion relative to 1Q23, mainly due to:

- A decrease in accounts receivable (COP -5.8 trillion), mainly due to the offsetting without transfer of resources between the balance receivable of the Fuel Price Stabilization Fund (FEPC) account against the dividends in favor of the Nation for COP -8.4 trillion, under Resolution 1612 of June 29, 2023. Additionally, there is a lower aggregate balance pending with the FEPC, given the joint strategy developed with the National Government, the gradual increase of gasoline prices in Colombia, and the decrease of the benchmark prices.
- A decrease in property, plant, equipment, and natural resources (COP -5.3 trillion), resulting from: i) a reduction in the closing exchange rate and its effect on the conversion of sums for companies using a functional currency other than the Colombian peso; ii) depreciation for the period, offset by: iii) increase in CAPEX mainly in Ecopetrol S.A. and Permian.
- A decrease in cash and the investment portfolio (COP -4.7 trillion), mainly due to: i) CAPEX investments; and ii) the payment of dividends during the quarter; offset by: iii) cash generated by operating cash flow.
- A decrease in taxes (COP -2.1 trillion), primarily associated with deferred taxes resulting from the appreciation of the COP and the impact it has on Group companies with a functional currency other than the peso.
- Decrease in inventories (COP -0.8 trillion).

The decrease in total liabilities of COP -21.1 trillion relative to 1Q23 was mainly due to:

- The account receivable account for the FEPC (COP -8.4 trillion), offset against dividends payable to the Nation.

- A decrease in debt (COP -8.3 trillion), generated by the effect of the revaluation of the peso against the dollar during 2Q23.
- A decrease in income tax (COP -1.7 billion), associated with the payment of the first installment of income tax of some Ecopetrol Group subsidiaries.

Total **equity** of the Ecopetrol Group at the end of 2Q23 reached COP 101.5 trillion. Equity attributable to Ecopetrol's shareholders was COP 74.8 trillion, an increase of COP +1.8 trillion as compared to 1Q23, mainly as a result of: i) annual profits; and ii) the effect of cash flow hedges and net investment in foreign business. The above is partially offset by the effect of the conversion of amounts of subsidiaries that use the USD as their functional currency.

Arbitration decision issued in favor of Reficar S.A.S.

On June 7, 2023, the Cartagena Refinery (Reficar SAS), was notified of the international arbitral tribunal decision that resolved the lawsuit filed by the Company against Chicago Bridge & Iron Company N.V., CB&I UK Limited Ltd. and CBI Colombiana S.A. (CB&I) at the International Chamber of Commerce, in relation to the engineering, procurement and construction contract for the expansion and modernization of the Cartagena Refinery. Also, the Arbitration Court dismissed the claims of CB&I for approximately USD \$400 million.

The Arbitration Court ordered CB&I to pay approximately USD \$1,000 million plus interest in favor of the Cartagena Refinery. Finally, is important to mention that the court's decision is binding on the parties and, as part of the legal process, it must be confirmed by the Court of the Southern District of New York, time at which the collection method will be evaluated, and the corresponding accounting records will be made.

Cash Flow and Debt

Table 4: Cash Position – Ecopetrol Group

Billion (COP)	2Q 2023	2Q 2022	6M 2023	6M 2022
Initial cash and cash equivalents	15,497	13,999	15,401	14,550
(+) Cash flow from operations	3,139	6,154	5,209	9,940
(-) CAPEX	(5,554)	(4,586)	(10,708)	(7,941)
(+/-) Investment portfolio movement	486	771	1,237	1,170
(+) Other investment activities	563	352	1,229	530
(+/-) Adquisition, borrowings and interest payments of debt	107	(1,701)	2,221	(2,975)
(-) Dividend payments	(2,334)	(5,692)	(2,561)	(5,965)
(+/-) Exchange difference (cash impact)	(567)	814	(691)	802
(-) Return of capital	(12)	(7)	(12)	(7)
Final cash and cash equivalents	11,325	10,104	11,325	10,104
Investment portfolio	1,629	1,887	1,629	1,887
Total cash	12,954	11,991	12,954	11,991

Cash Flow

At the end of 2Q23, the Ecopetrol Group reported cash totaling COP 13.0 trillion (35% COP and 65% USD). During the quarter, operating cash flows amounting to COP 3.1 trillion were generated for the Group from operations across all business segments. It is worth noting that the increase in sales volumes was leveraged on production increases and positively impacted the Midstream segment, refinery performance, and energy projects. This was partially offset by the increase in working capital from the accumulation of price spread balances recognized in the FEPC account and the payment of income tax by some subsidiaries.

The main cash outflows during the quarter include: i) CAPEX disbursements for COP 5.6 trillion, allocated primarily to Ecopetrol, Permian, ISA, and CENIT; and ii) dividend payments totaling COP 2.3 trillion, whereby Ecopetrol paid COP 0.9 trillion to its minority shareholders and COP 1.4 billion were paid by the subsidiaries to their shareholders.

Debt

At the end of June 2023, the balance sheet debt amounted to COP 108.1 trillion, or USD 25,866 million (ISA Group's consolidated debt contributes USD 7,847 million), with a decrease of COP -8.3 trillion compared to 1Q23. This decrease is primarily due to the effect of the appreciation of the peso against the US dollar during the second quarter of 2023.

The Gross Debt/EBITDA indicator at the end of June 2023 closed at 1.6 times, within the range established in the Ecopetrol Group's 2040 strategy. The Debt/Equity ratio at the end of June 2023 is 1.06 times.

On June 28, 2023, a successful placement of External Public Debt Bonds was carried out in the international capital market for USD \$1.5 billion³. The proceeds from the transaction will be used for the financing of the organic investment plan, as well as other expenditures. Additionally, on July 7, 2023, as part of the comprehensive debt management strategy, the early repayment of the remaining international bond, due in September 2023 and issued in 2013, was announced. The current outstanding nominal amount of the mentioned bond is USD \$821.5 million with a coupon rate of 5.875%. The bonds will be redeemed on August 7, 2023⁴.

Efficiencies

In 2Q23 the Ecopetrol Group continues working on a comprehensive strategy seeking to enhance efficiency and competitiveness that will enable the Company to continue its positive operating performance despite the impact of inflation. Initiatives continue to be developed aimed at leveraging improvements in costs and expenses, investments and revenues through optimizations and synergies.

At the close of 2Q23, the Group has incorporated cumulative efficiencies for the year, totaling COP 1,592 billion, the main actions of which are summarized as follows:

1. Strategies focused on maintaining good operating results for COP 1,109 billion, aiming at:
 - In 2Q23, the dilution factor decreased from 12.4% in 2022 to 11.6% in 2Q23 as a result of strategies to increase transportation viscosity and improve the performance of LPG co-dilution.
 - The identification and implementation of strategies that contribute to reducing lifting costs associated with production.
 - Initiatives deployed by corporate and support areas.
 - Strategies to increase the self-generation of energy to optimize costs and generate energy efficiencies using technology.
 - Tactics to improve marketing margins and revenues implemented by the sales department and refining and petrochemical operations.
2. Strategies implemented to optimize investments and improve the operational and technical performance of the projects have incorporated efficiencies totaling COP 483 billion pesos, as a result of:
 - Synergies in production projects in the Piedemonte region through the comprehensive analysis of facilities in Cupiagua and Cusiana.
 - Approaches for optimizing design and engineering for the efficient use of materials and the reduction of construction times in refining, development, and transportation projects.

³ For more information: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ecopetrol.com.co/wps/wcm/connect/31392c47-880a-4a82-8400-6af724ac561e/emision-bono-junio-en.pdf?MOD=AJPERES&attachment=false&id=1688081081694>

⁴ For more information: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ecopetrol.com.co/wps/wcm/connect/af60f303-46ba-4be0-903a-93fddf068a12/make-whole-bono-eng.pdf?MOD=AJPERES&attachment=false&id=1689723718720>

Investments

Table 5: Investments by Business – Ecopetrol Group

Investments	Ecopetrol Group Total 1H 2023		% Share
	MUSD	TCOP Equivalent	
Hydrocarbons*	1,829	8.4	68.6%
Low-Emissions Solutions**	320	1.5	12.0%
Energy Transmission and Toll Roads	518	2.4	19.4%
Business Line	2,667	12.3	

* Includes the total amount of investments in hydrocarbon transport of each of the subsidiaries and affiliates of the Ecopetrol Group Companies (both controlling and non-controlling interest).

Average exchange rate for 1H23: 4,595

**Includes gas and LPG investments

By the end of 2Q23, the Ecopetrol Group's organic investments amounted to USD 2,667 million (COP 12.3 trillion). Total investments for the Ecopetrol Group were allocated as follows: 59% were executed in Colombia, while the remaining 41% were executed abroad, primarily in the United States (27%) and Brazil (6%).

Hydrocarbons

The segment represented 69% of the Group's organic investments. Resources were allocated primarily to drilling, completion activities and construction of facilities in the Rubiales, Caño Sur, Castilla, Chichimene, Floreña and CPO9 fields. Exploration activities were also carried out in the CPO9, Middle valley Magdalena and Santiago de las Atalayas (SDLA) blocks. At the international level, investments centered on development activities in the Permian Basin located in Texas (US) and the Gunflint, K2 and Dalmatian assets located in the Gulf of Mexico.

Investments in the Midstream segment focused mainly on operational continuity activities, including geotechnical, mechanical repairs and maintenance of pumping units, which enables us to maintain the integrity and reliability of the different pipeline and multipurpose pipeline systems. In the Downstream segment, investments focused on operational continuity, seeking to maintain the efficiency, reliability, and integrity of refinery operations.

Low-Emission Solutions

By the end of 2Q23, USD 320 million (COP 1.5 trillion) have been invested, of which nearly USD 263 million (COP 1.2 trillion) were allocated to gas projects focused on assets located in the Piedemonte region as well as in exploration activities. The remaining resources (USD 57 million) were allocated to renewable energy, energy efficiency, fuel quality, and hydrogen projects. Investments associated with decarbonization projects progressed towards the goals of reducing greenhouse gas emissions, achieving an accumulated reduction of 1.09 MtCO_{2e} by 2Q 2023 (Scopes 1 and 2), getting closer to the methane goal for 2025 (45% reduction) and the goal of 25% reduction of greenhouse gases scopes 1 and 2 for 2030.

Transmission and Toll Roads

By the end of 2Q23, a total of USD 518 million (COP 2.4 trillion) had been invested, of which 78% corresponded to the energy transmission business, 19% to the toll roads business and the remaining 3% to the telecommunications business. These investments made it possible to move forward in the construction of transmission lines and in improvements aimed at increasing the reliability of the existing network, as well as in the Ruta del Loa, Ruta de la Araucanía and Ruta de los Rios road projects in Chile.

II. Results by Business Line

The Ecopetrol Group will continue to work on the alignment of its financial reporting to reflect the corresponding results under the new business lines. At the end of this Chapter there is a proforma of the financial results under this scheme.

In this report, the operating and financial information of the business segments continues to be presented in accordance with the methodology that has been reported up to now.

1. HYDROCARBONS

1.1 UPSTREAM

Exploration

In 2Q2023, Ecopetrol and its partners drilled 2 exploratory wells, Kimera-1 (operated by Ecopetrol with the participation of Repsol 45%) in the Llanos Orientales, and Pollera Norte-1 (operated by Lewis, with the participation of Hocol 50%), in Colombia Norte; for a total amount of 10 exploratory wells during the first semester.

Additionally, during the 2Q23 the following wells drilled were announced as exploratory successes: Tinamú-1, drilled at the end of 2022 by Ecopetrol in association with Repsol (45%).

Offshore exploration activity in Colombia continues with the evaluation and maturation of the projects associated with the recent Uchuva-1 and Gorgón-2 discoveries in the Colombian Caribbean; in particular, the Uchuva appraisal campaign, while studies on its development also continue.

For the second half of this year the completion of the drilling of the Glaucus-1 close to the Gorgón block and the initial drilling of the Orca Norte-1 are scheduled.

Concerning seismic activity, the following advances made during 2Q23 are worth mentioning: i) completion of the registration of 312 km² with the Flamencos 3D program (100% Ecopetrol) located in the Mid Magdalena Valley, municipalities of Puerto Wilches and Sabana de Torres, in Santander; ii) completion of the acquisition of 210 km of the SSJN1 2D seismic program (Hocol 50%, Lewis 50%), located in the Sinú San Jacinto basin; iii) completion of the recording of 10.5 km² of the INOR 3D seismic program, in La Cira Infantas; and, iv) the purchase of 1,442 km of 2D seismic in the Llanos Orientales and Mid Magdalena Valley.

In relation to seismic reprocessing, during the second quarter were executed approximately 4,571 equivalent km of 2D/3D seismic information, distributed as follows: 980 km between the Mid and Upper Magdalena Valleys; 1,849 km in the Piedemonte and 1,742 km offshore. The foregoing seeks to reduce uncertainty based on a better interpretation of existing data, which will allow the identification, evaluation, and maturation of new opportunities.

In the international sphere, the Brazilian subsidiary during 2Q23 made progress in the 3D seismic acquisition of the Santos Sur project.

Production

Table 6: Gross Production – Ecopetrol Group

Production - mboed	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Crude Oil	498.7	494.8	0.8%	497.6	491.3	1.3%
Natural Gas	127.8	135.3	(5.5%)	128.4	133.9	(4.1%)
Total Ecopetrol S.A.	626.5	630.2	(0.6%)	626.0	625.2	0.1%
Crude Oil	17.0	16.9	0.6%	17.1	16.5	3.6%
Natural Gas	18.1	20.4	(11.3%)	18.5	20.2	(8.4%)
Total Hocol	35.0	37.3	(6.2%)	35.6	36.7	(3.0%)
Crude Oil	6.7	8.8	(23.9%)	6.0	8.5	(29.4%)
Natural Gas	1.1	1.3	(15.4%)	1.0	1.2	(16.7%)

Total Ecopetrol America	7.8	10.1	(22.8%)	7.0	9.7	(27.8%)
Crude Oil	33.7	16.6	103.0%	31.2	16.9	84.6%
Natural Gas	25.0	10.4	140.4%	23.9	9.9	141.4%
Total Ecopetrol Permian	58.7	27.0	117.4%	55.1	26.8	105.6%
Crude Oil	556.0	537.1	3.5%	551.9	533.1	3.5%
Natural Gas	172.0	167.5	2.7%	171.8	165.3	3.9%
Total Ecopetrol Group	728.0	704.6	3.3%	723.7	698.4	3.6%

Note 1: Gross production includes royalties and is prorated by Ecopetrol's participation in each Company. Natural Gas includes gas and white products (LPG, propane and butane).

Note 2: At the request of the ANH, condensate production is considered as the production of crude oil and not of white products in the Gibraltar field, which adjusts the distribution between crude oil and natural gas in 1Q22 and 2Q22.

In 2Q23, Ecopetrol Group production reached 728.0 mboed, increasing 23.4 mboed as compared to 2Q22, with Ecopetrol S.A. contributing 626.5 mboed and the subsidiaries 101.5 mboed. It highlights: i) incremental performance in Rubiales; ii) the continued incremental campaign in Caño Sur, which reached production levels of 31.6 mboed in 2Q23; iii) incremental production from the Permian subsidiary, which reached production levels of 58.7 mboed for Ecopetrol before royalties in the quarter. The above offset the impacts of physical security events, which generated an adverse effect of approximately -6.4 mboed in the quarter.

In terms of drilling, at the end of the first half of 2023, the Ecopetrol Group drilled and completed 218 development wells, with an average of 29 teams.

Lifting and Dilution Cost

Table 7: Lifting Cost* - Ecopetrol Group

USD/BI	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)	% USD
Lifting Cost*	10.08	9.83	2.5%	9.41	9.28	1.4%	25.2%
Dilution Cost**	4.44	6.78	(34.5%)	4.66	6.53	(28.6%)	100.0%

*Calculated based on barrels produced without royalties. ** Calculated based on barrels sold.

Lifting Cost

Compared to 2Q22, the lifting cost increased by 0.25 USD/BI and in 6M23 was 9.41 USD/BI, +0.13 USD/BI as compared to the same period of prior year. The variation of 1H23 compared to 1H22 is mainly explained by:

Cost Effect (+2.11 USD/BI): Increased costs due to: i) higher electricity rates and increased consumption associated with heightened production levels; ii) increased operating support services costs mainly due to the inflationary effect on rates, well interventions and chemical treatment.

Exchange Rate Effect (-1.64 USD/BI): Impact from the average devaluation of COP +681 against the USD, from COP 3,914 to COP 4,595.

Volume Effect (-0.34 USD/BI): Higher production levels.

Dilution Cost

Compared to 2Q22, dilution cost decreased by 2.33 USD/BI and in 6M23 was at 4.66 USD/BI, 1.87 USD/BI below the same period of prior year. This last result is mainly explained by:

Price Effect (-0.69 USD/BI): Decrease in the purchase price of naphtha (COP -31.83 USD/BI) associated with the correction in the Brent benchmark indicator.

Exchange Rate Effect (-0.82 USD/BI): Impact from the average devaluation of peso against the dollar +681 COP/USD.

Volume Effect (-0.36 USD/BI): Higher purchase volume of naphtha barrels (+4.42 mbpd) due to higher production in heavy crude fields.

Financial Results

Table 8: Income Statement – Exploration and Production

Billion (COP)	2Q 2023	2Q 2022	Δ (\$)	Δ (%)	6M 2023	6M 2022	Δ (\$)	Δ (%)
Total revenue	19,509	25,292	(5,783)	(22.9%)	40,135	44,230	(4,095)	(9.3%)
Depreciation, amortization and depletion	2,047	1,712	335	19.6%	3,882	3,311	571	17.2%
Variable costs	7,407	7,412	(5)	(0.1%)	15,041	12,963	2,078	16.0%
Fixed costs	3,370	2,950	420	14.2%	6,594	5,518	1,076	19.5%
Total cost of sales	12,824	12,074	750	6.2%	25,517	21,792	3,725	17.1%
Gross Income	6,685	13,218	(6,533)	(49.4%)	14,618	22,438	(7,820)	(34.9%)
Operating and exploratory expenses	1,401	1,340	61	4.6%	2,775	2,494	281	11.3%
Operating Income	5,284	11,878	(6,594)	(55.5%)	11,843	19,944	(8,101)	(40.6%)
Financial result, net	(814)	(532)	(282)	53.0%	(903)	(939)	36	(3.8%)
Share of profit of companies	7	1	6	600.0%	12	0	12	-
Income before income tax	4,477	11,347	(6,870)	(60.5%)	10,952	19,005	(8,053)	(42.4%)
Provision for income tax	(2,539)	(3,994)	1,455	(36.4%)	(6,352)	(6,662)	310	(4.7%)
Consolidated net income	1,938	7,353	(5,415)	(73.6%)	4,600	12,343	(7,743)	(62.7%)
Non-controlling interest	24	21	3	14.3%	53	42	11	26.2%
Net income attributable to owners of Ecopetrol	1,962	7,374	(5,412)	(73.4%)	4,653	12,385	(7,732)	(62.4%)
EBITDA	7,598	13,852	(6,254)	(45.1%)	16,264	23,714	(7,450)	(31.4%)
EBITDA Margin	38.9%	54.8%	-	(15.9%)	40.5%	53.6%	-	(13.1%)

Revenues for 2Q23 and the 1H23 decreased compared to 2Q22 and 1H22, mainly due to: i) lower Brent benchmark prices; ii) an increase in crude basket spreads versus the Brent price indicator. The above was offset by: i) a higher average exchange rate, and ii) an increase in crude sales, as a result of the incremental production.

Cost of sales for 2Q23 and 1H23 increased compared to 2Q22 and 1H22, due to:

- An increase in volumes purchased from the ANH, offset by lower prices.
- An increase in costs due to: i) inflationary effects over global electricity rates, well maintenance and chemical treatment tariffs, and operating support services costs; ii) incremental activities in subsoil, surface, and contracted services; iii) higher consumption of electricity and chemical treatment, associated with incremental production.
- An increase in transportation costs due to: i) an increase in the average exchange rate; and ii) higher volume transported resulting from greater production levels.

Operating expenses (net of revenues) for 2Q23 and 1H23 increased compared to 2Q22 and 1H22, mainly due to: (i) incremental labor expense due to a rise in the CPI (consumer price index); (ii) an increase in customs operations resulting from a sales volumes under the DAP (Delivery at Place) modality and increased tariffs; and (iii) updating of environmental and miscellaneous provisions and contingency well services, offset by (iv) the write-off of the investments made in the Rydberg asset by Ecopetrol America recorded in 2022.

Exploration expenses in 2Q23 decreased compared to 2Q22, due to a lower recognition of unsuccessful wells.

Net financial results (non-operating) for 2Q23 increased compared to the same period of the previous year, mainly due to: i) higher debt interests as a result of the indebtedness level and increases in interest rates; ii) the segment's liability position; iii) recognition of the provision for late payment interest due to final public works contribution rulings, however, compared to the 1H22 there was a decrease due to the effect of the exchange rate and higher investment portfolio returns.

1.2 Midstream

Table 9: Transported Volumes - Ecopetrol Group

mbd	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Crude Oil	795.4	779.1	2.1%	789.7	768.3	2.8%
Products	302.3	298.3	1.3%	304.3	290.9	4.6%
Total	1,097.7	1,077.4	1.9%	1,094.0	1,059.2	3.3%

Note: Volumes reported are subject to adjustments due to Volumetric Quality Control (VQC) changes as the volumetric balances are formalized.

The total volume transported at the end of 2Q23 reached 1,097.7 mbd, a 20.3 mbd increase versus 2Q22, largely due to a 2.1% increase in crude oil transported resulting from higher production volumes, especially in the Llanos region, and a 1.3% volume increase in refined products transported during 2Q23 from 2Q22. Aggregate results for 1H23 totaled 1,094 mbd, a 3.3% increase compared to 1H22 attributable to the aforementioned conditions.

Crude: Volumes of crude transported increased by 2.1% in 2Q23 compared to 2Q22, as a result of: i) increased domestic production, mainly in the Llanos region; ii) higher deliveries of Castilla Norte crude to the Refinería de Barrancabermeja; and iii) additional third-party barrels captured that were previously outside the pipeline network. Approximately 86.1% of the crude volume transported was owned by the Ecopetrol Group.

During 2Q23, there were 22 incidents of pipeline damages caused by third parties, a 120% increase with respect to 2Q22. For its part, the installation of illicit valves in 2Q23 decreased by 7% compared to 2Q22. To ensure the evacuation of the production from the Caño Limón field after the damages to the Caño Limón - Coveñas pipeline caused by third parties, in 2Q23 7 reversion cycles were performed in the Bicentenario pipeline, with an evacuated volume of approximately 1.9 million barrels compared to 1 cycle of 292 thousand barrels in 2Q22. Likewise, an alternative route was commissioned to evacuate condensed crude from Gibraltar and unload it in Ayacucho as a heavy crude diluent, under these strategy during June approximately were received 6.2 mbd, allowing the production of approximately 30 mcfg in the field.

Refined Products: In 2Q23, volumes of refined products transported increased by 1.3%, mainly attributed to greater refinery production availability and operational streamlining in the transport systems.

During the quarter, the installation of illicit valves increased by 47% versus 2Q22. Approximately 27.6% of the volume transported by pipeline consisted of Ecopetrol products.

Regulatory framework for pipeline transportation rates

The Ministry of Mines and Energy published on march 30, 2023 the Resolution No. 00279: "Whereby some temporary provisions are established concerning the setting of rates for the transportation of crude oil by pipeline", which suspends the application of the annual rate update factor for macroeconomic variables and stipulates that the rates set for the period between July 2019 and June 2023 will remain in force until the rates for the July 2023 - June 2027 period are determined, following the terms established by the new methodology to be issued.

Assisting the supply of fuel in the southwest of the country

Due to the contingency registered at the beginning of the year in the southwest of the country resulting from a natural disaster that blocked part of the Pan-American highway and remains under slow-flow motion and among its impacts generated fuel shortages, Cenit during 2Q23 continued to perform a cabotage operation from the Buenaventura maritime terminal to the Tumaco terminal, partially guaranteeing the provision of products to this area of the country. Under this strategy during the quarter, 9 vessels were loaded, allowing the Business Group to supply approximately 193 thousand barrels of gasoline and diesel to the southwest regions.

ANLA approval of the fuel supply line to the El Dorado airport:

As part of the Puerto Salgar - Bogota hydrocarbon transportation system project, in the Mansilla - Puente Aranda section, the National Environmental Licensing Authority (ANLA) approved the construction and operation of the line of a Jet-A1 fuel supply line to Bogota's El Dorado international airport. This decision grants the project environmental viability, improving the time and costs required to process the environmental license associated with this process.

Reficar Blend crude oil Coveñas - Cartagena:

In May, 241 kbls of Reficar Crude Blend (CMR) were transported from Coveñas - Cartagena, maintaining a constant throughput in the Refinería de Cartagena during the scheduled maintenance of the Coveñas - Cartagena system for 36 hours.

Cost per Barrel Transported

Table 10: Cost per Barrel Transported - Ecopetrol Group

USD/BI	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)	% USD
Cost per Transported Barrel	2.95	2.76	6.9%	2.76	2.76	0.0%	22.6%

The aggregate cost per barrel transported as of June 2023 and June 2022 stood at 2.76 USD/BI, mainly explained by:

Cost effect (+0.49 USD/BI): i) Higher maintenance and contracted services costs; ii) higher variable cost due to increased materials and energy consumption from higher volumes transported and rate increases consistent with market conditions; iii) impact of the COP: USD exchange rate on costs; iv) higher labor costs and expenses; and v) greater product loss and replacement expenses.

Exchange Rate Effect (-0.41 USD/BI): Impact from an increase in the average COP: USD exchange rate of COP +680.6 per USD.

Volume Effect (-0.09 USD/BI): Lower cost per barrel for additional volume transported (+3.3%) versus the aggregate to June 2022, associated with: i) increased national production, mainly in the Llanos region; ii) higher deliveries of Castilla Norte crude to the Refinería de Barrancabermeja; iii) additional third-party barrels captured that were previously outside the pipeline network; and iv) increase in the volume of refined products transported primarily due to greater product availability in the refineries and operational streamlining of the transport systems.

Financial Results

Table 11: Income Statement – Midstream

Billion (COP)	2Q 2023	2Q 2022	Δ (\$)	Δ (%)	6M 2023	6M 2022	Δ (\$)	Δ (%)
Total revenue	4,068	3,145	923	29.3%	8,052	6,208	1,844	29.7%
Depreciation, amortization and depletion	361	343	18	5.2%	715	670	45	6.7%
Variable costs	216	166	50	30.1%	409	322	87	27.0%
Fixed costs	488	371	117	31.5%	924	714	210	29.4%
Total cost of sales	1,065	880	185	21.0%	2,048	1,706	342	20.0%
Gross income	3,003	2,265	738	32.6%	6,004	4,502	1,502	33.4%
Operating expenses	230	191	39	20.4%	450	390	60	15.4%
Operating income	2,773	2,074	699	33.7%	5,554	4,112	1,442	35.1%
Financial result, net	(13)	(11)	(2)	18.2%	(22)	(208)	186	(89.4%)
Share of profit of companies	0	(1)	1	(100.0%)	0	(1)	1	(100.0%)
Income before income tax	2,760	2,062	698	33.9%	5,532	3,903	1,629	41.7%
Provision for income tax	(992)	(724)	(268)	37.0%	(1,977)	(1,379)	(598)	43.4%
Consolidated net income	1,768	1,338	430	32.1%	3,555	2,524	1,031	40.8%
Non-controlling interest	(343)	(252)	(91)	36.1%	(683)	(492)	(191)	38.8%
Net income attributable to owners of Ecopetrol	1,425	1,086	339	31.2%	2,872	2,032	840	41.3%
EBITDA	3,186	2,433	753	30.9%	6,372	4,852	1,520	31.3%
EBITDA Margin	78.3%	77.4%	-	0.9%	79.1%	78.2%	-	0.9%

Revenues for 2Q23 and the 1H23 of 2023 increased versus the same periods in 2022, respectively, primarily attributed to the combined effect of: i) higher average COP: USD exchange rate; ii) annual rate updates; iii) greater crude oil volumes transported as a result of increased national production; iv) greater volumes of refined products transported consistent with higher refinery production and operational streamlining in the transport systems; and v) execution of more provisional reversal cycles in the Bicentenario pipeline.

Cost of sales for 2Q23 and 1H23 of 2023 increased versus the same periods in 2022, respectively, mainly due to the effect of: i) higher fixed costs associated with operation, maintenance, contracted services, and personnel costs; ii) greater variable costs owing to higher materials and energy consumption from higher transported volumes and price increases consistent with market conditions; and iii) impact of the COP: USD exchange rate on costs.

Operating expenses (net of revenues) for 2Q23 and the 1H23 increased versus the same periods in 2022, respectively, primarily attributed to higher personnel expenses, higher insurance expenses and increased emergency repair expenses due to additional damages caused by third parties to the infrastructure.

The **net financial result (non-operating)** for 1H23 versus 1H22 improved, mainly due to: i) higher financial yields related to interest rate behavior on deposits and investments; and ii) financial income from the partial buyback operation on the outstanding bonds at Ocesa. There were no significant variations in the financial result between 2Q23 and 2Q22.

1.3 Downstream

In 2Q23, the Downstream segment achieved a historical quarterly record with a combined throughput of 428 mbd, supported by the continuous operation of the Cartagena - IPCC Crude Oil Plant Interconnection project, the elimination of bottlenecks and an operational availability exceeding 96%. This translates into a historical clean fuel production record of 156 mbd of diesel, 121 mbd of gasoline, and 36 mbd of jet fuel.

As a result, we were able to attain a double-digit combined refining gross margin of 14.4 USD/BI, 36% below that of 1Q23, and 50% below 2Q22, mainly due to lower diesel and jet fuel prices and higher crude oil prices.

Tactical, operational, and commercial strategies were applied to offset the impact of a contraction in fuel demand and global inflation, which resulted in: i) operational stability in the refinery units and petrochemical plants; ii) unified logistics chain planning that resulted in maximized consumption of domestic crude oil by the refineries; iii) an efficient commercial strategy to capture new business opportunities; and iv) positive performance of the segment's efficiency program, netting income, investment, and cost benefits.

To June 2023, the refineries have delivered gasoline and diesel that complies with the fuel quality standard stipulated in Resolution 40103 (maximum sulfur content in gasoline of 50 ppm and diesel of 15 ppm). Consistent with these specifications, in the first half of 2023 the Downstream segment provided gasoline with a sulfur content below 46 ppm and diesel below 10 ppm.

Regarding the energy transition, noteworthy progress has been achieved in the following key projects, aligned with the pillars of the 2040 Strategy:

- The SAF⁵ & HVO⁶ production units of the Refinería de Barrancabermeja were approved for Start-up, delimiting therein its position within the portfolio and maturation plan for the next phase. This project will contribute to Ecopetrol's competitiveness by supplying low-emission fuels to the aviation market.
- The commissioning of the electrolyzer project in Esentia, which allows for the production of hydrogen from water, with solar panels as a source of energy, to partially cover the operation's in-house consumption.

Cartagena Refinery

In 2Q23, Cartagena Refinery achieved a record quarterly throughput of 209 mbd, supported by the continuous operation of the Cartagena - IPCC Crude Oil Plant Interconnection project and the high operational availability of the plants (96.3%).

Gross margin in 2Q23 reached 16.2 USD/BI, 48.7% lower than 2Q22, mainly due to a drop in fuel spreads versus Brent in international markets.

Table 12: Throughput, Utilization Factor, Production and Refining Margin – Cartagena Refinery

⁵ SAF: Sustainable Aviation Fuel / Sustainable Renewable Jet Fuel

⁶ HVO: Hydrotreated Vegetable Oil / Renewable Diesel Oil

Cartagena Refinery	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Throughput* (mbd)	209.0	141.7	47.5%	199.1	137.8	44.5%
Utilization Factor (%)	95.9%	75.8%	26.5%	92.4%	63.9%	44.5%
Production (mbd)	203.5	141.4	43.9%	193.5	135.1	43.2%
Gross Margin (USD/BI)	16.2	31.6	(48.7%)	21.1	25.3	(16.6%)

Refinería de Barrancabermeja

In 2Q23, the Refinería de Barrancabermeja's throughput was 218.7 mbd, 2.1% lower than in 2Q22, primarily because of the lower availability of light crude due to the attacks on the Caño Limón Coveñas pipeline. It is worth noting the high availability of the refinery in 2Q23 (96.6%) and 1H23 of (96.7%), exceeded the corresponding 2022 levels (by 1% and 5%, respectively).

Gross margin in 2Q23 was 12.7 USD/BI, down 53.5% from 2Q22, mainly on account of a drop in fuel spreads versus Brent in international markets.

Table 13: Throughput, Utilization Factor, Production and Refining Margin – Refinería de Barrancabermeja

Barrancabermeja Refinery	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Throughput* (mbd)	218.7	223.5	(2.1%)	220.8	207.3	6.5%
Utilization Factor (%)	79.9%	81.5%	(2.0%)	81.2%	69.3%	17.2%
Production (mbd)	221.8	226.9	(2.2%)	224.1	210.5	6.5%
Gross Margin (USD/BI)	12.7	27.3	(53.5%)	16.0	19.7	(18.8%)

Esenttia

In 2Q23, total sales decreased by 23.9% year-on-year, consistent with lower demand. Total margin decreased by 91.7% in 2Q23 versus 2Q22, impacted by market factors including: i) falling prices owing to high inventories and low demand for polypropylene worldwide; and ii) lower availability of domestic raw material.

Table 14: Sales and Margin – Esenttia

Esenttia	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Total Sales (Kton)	101.4	133.2	(23.9%)	241.4	268.1	(10.0%)
Total Margin (USD/Ton)	27.4	331.3	(91.7%)	55.8	298.6	(81.3%)

Invercolsa⁷

At the end of June 2023, 4,217 families in the city of Pasto in the department of Nariño have benefited from the agreement signed with the Ministry of Mines and Energy, which has resources from the *Fondo Especial Cuota de Fomento* (FECF), as well as the current benefit provided by Alcanos to subsidize part of the internal network and connection rights for families in strata 1 and 2.

Refining Cash Cost

Table 15: Refining Cash Cost*

USD/BI	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)	% USD
Refining Cash Cost	4.21	4.66	(9.7%)	3.94	4.58	(14.0%)	17.0%

*Includes Barrancabermeja and Cartagena refineries and Esenttia

Refining cash cost fell by 0.45 USD/BI in 2Q23 versus 2Q22, explained by:

Cost effect (+0.59 USD/BI): Higher operational activity and inflationary effect.

⁷ As announced in the proforma of the results by business line (section 4), Invercolsa will be reported in the Low Emission Solutions business line.

Exchange rate effect (-0.56 USD/BI): Impact from an increase in the average COP: USD exchange rate of COP +516.45 per USD.

Volume effect (-0.48 USD/BI): Higher crude throughput of +62 mbd in refineries.

The aggregate to June 2023 decreased by 0.64 USD/BI year-on-year, explained by:

Cost effect (+0.85 USD/BI): Higher operational activity and inflationary effect.

Exchange rate effect (-0.69 USD/BI): Increase in the average COP: USD exchange rate of COP +681 per USD.

Volume effect (-0.80 USD/BI): Higher crude throughput of +74 mbd in refineries.

Financial Results

Table 16: Income Statement - Downstream

Billion (COP)	2Q 2023	2Q 2022	Δ (\$)	Δ (%)	6M 2023	6M 2022	Δ (\$)	Δ (%)
Total revenue	20,024	24,422	(4,398)	(18.0%)	42,608	41,541	1,067	2.6%
Depreciation, amortization and depletion	553	413	140	33.9%	1,084	819	265	32.4%
Variable costs	17,720	19,989	(2,269)	(11.4%)	36,277	34,754	1,523	4.4%
Fixed costs	669	532	137	25.8%	1,275	1,007	268	26.6%
Total cost of sales	18,942	20,934	(1,992)	(9.5%)	38,636	36,580	2,056	5.6%
Gross income	1,082	3,488	(2,406)	(69.0%)	3,972	4,961	(989)	(19.9%)
Operating expenses	556	529	27	5.1%	1,114	1,014	100	9.9%
Operating income (loss)	526	2,959	(2,433)	(82.2%)	2,858	3,947	(1,089)	(27.6%)
Financial result, net	(298)	(559)	261	(46.7%)	(571)	(725)	154	(21.2%)
Share of profit of companies	51	60	(9)	(15.0%)	140	114	26	22.8%
Loss before income tax	279	2,460	(2,181)	(88.7%)	2,427	3,336	(909)	(27.2%)
Provision for income tax	240	(602)	842	(139.9%)	(546)	(949)	403	(42.5%)
Consolidated net income	519	1,858	(1,339)	(72.1%)	1,881	2,387	(506)	(21.2%)
Non-controlling interest	(49)	(52)	3	(5.8%)	(113)	(93)	(20)	21.5%
Net income attributable to owners of Ecopetrol	470	1,806	(1,336)	(74.0%)	1,768	2,294	(526)	(22.9%)
EBITDA	1,373	3,685	(2,312)	(62.7%)	4,610	5,327	(717)	(13.5%)
EBITDA Margin	6.9%	15.1%	-	(8.2%)	10.8%	12.8%	-	(2.0%)

Revenues for 1H23 versus 1H22 increased, as a result of higher sales and an increase in the average COP: USD exchange rate, which offset the decrease in product prices, mainly in middle distillates and gasoline, associated with market factors. Compared to 2Q22, revenues in 2Q23 decreased owing to lower product prices, partially offset by the effect of the average COP: USD exchange rate.

Cost of sales in 1H23 versus 1H22 was mainly influenced by higher crude oil purchases, increased use of inventory stock, and a rise in the average COP: USD exchange rate, partially offset by lower refinery crude feedstock prices. Relative to 2Q22, 2Q23 costs decreased mainly due to lower feedstock cost, offset by the increase in the average COP: USD exchange rate, increased use of inventories, and greater crude oil purchases.

Operating expenses (net of revenues) for 1H23 and 2Q23 increased compared to 1H22 and 2Q22, mainly explained by higher commercialization expenses.

The **financial results (non-operating)** for 1H23 and 2Q23 versus the same periods in 2022, showed lower expenses as a result of the revaluation of the COP versus the USD noted during the year affecting the segment's net liability position.

1.4 Commercial Strategy

During 2Q23, we continued our strategy aimed at diversifying markets and destinations, supported by the stability of our crude oil quality and supply reliability. Likewise, the crude oil purchase program from third parties was strengthened in order to guarantee continuity in all our operations.

2. LOW-EMISSIONS SOLUTIONS

Gas Strategy and Sales

In the Low-Emission Solutions business line, natural gas and LPG accounted for 22.0% of the Group's total production, reaching 159.8 mboed⁸. During 2Q23, gas demand averaged 98.6 mboed, registering a decrease of -4.5% (-4.6 mboed) compared to 2Q22. This is due to lower customer demand (mostly for Natural Gas Vehicles - NGV and in the non-regulated market) and decreased volume available in La Guajira due to maintenance. Likewise, during 2023, gas supply has been affected by public order events with an impact on Gibraltar.

Renewable Energies

Regarding the operations of our Brisas, Castilla, and San Fernando solar parks and the Cantayús Small Hydroelectric Plant, by the end of 1H23, we were able to achieve reductions of 12,300 tons of CO₂ equivalent, as well as savings of approximately COP 13,553 million. Along the same lines, and as part of our promise to incorporate 400 MW of non-conventional renewable energy sources into our energy matrix, to date we have completed the construction of 7 MW at the Granja Solar Cartagena solar park. Moreover, we have an additional 94 MW under construction, originating from La Cira (56 MW), Cartagena Refinery (16 MW), and Cenit parks (15MW), from three projects in Copey, Ayacucho, and Vasconia and ODC's project in Caucasia (7 MW).

Energy Efficiency

In 1H23, the energy efficiency program has achieved reductions of 2.0 MW and 110 GBTU through energy optimization and avoided 35.5 mtCO₂e of emissions and energy cost efficiency savings of COP 10.5 billion, equal to an aggregate electricity optimization of 5.8% from 2018 to June 2023 relative to the initial target of 6.3% by yearend.

The positive energy efficiency effects have been achieved through the implementation of investments and operational actions in the assets of the three segments of the hydrocarbon business, including the implementation of the Visual Mesa energy management system and ISO 50001 operational control parameters in the Barrancabermeja and Cartagena refineries. Additionally, most notable in the Upstream is the amelioration of transmission and distribution lines' losses in the Orinoco region, the use of onsite energy sources for self-generation, and the implementation of PMM engines in extraction wells with electro-submersible pumping systems.

Finally, in the Midstream segment, pumping systems in operations have been employed to optimize operational energy use.

Hydrogen

June 7 marked the start-up of the electrolyzer project in Esenttia that aims to generate hydrogen from water using solar panels as an energy source to partially cover the operation's in-house consumption, achieving 348 hours of operation and hydrogen production of 557 kg by July 10. As for our hydrogen project portfolio, with the support of CENIT and H2B2, the first hydrogen supply was delivered to the SITP bus in Bogota for commissioning tests. The green hydrogen megaprojects in the refineries began basic engineering in May and progress was made in negotiating the Joint Development Agreement (JDA) with the partners.

3. ENERGY TRANSMISSION AND TOLL ROADS

3.1 Energy transmission

Projects awarded

⁸ Figure includes gas and Liquefied Petroleum Gas (LPG) and excludes LNG (Liquefied Natural Gas).

During 2Q23, ISA, through ISA CTEEP, won two lots awarded in the first public power transmission auction held this year by Brazil's National Electric Energy Agency (ANEEL). ANEEL⁹ estimates the investment for these projects will be close to \$R2,400 million (around COP 2.1 trillion) and will add more than 1,044 kilometers of circuit to the transmission line once they come into operation. Additionally, ISA was awarded six expansions in Brazil and signed a connection in Colombia.

Project start-ups

- Colombia ISA INTERCOLOMBIA began operations on the interconnection project UPME 07-2017 Sabanalarga - Bolívar project which strengthens the existing network in northern Colombia and favors the energy supply in the departments of Bolívar and Atlántico. Transelca began operating the SmartValves in the Santa Marta substation, through which it expects to increase the capacity of the northern system supporting reliability and the connection of renewable sources of energy.
- ISA CTEEP has announced the implementation of 14 upgrades to Brazil's transmission network.

ISA will continue to advance in the construction of 33 power transmission projects, which represent over 3,400 km of additional circuits to the network. Upon entering into operation, these projects will generate new income for ISA of approximately COP 1.0 trillion.

3.2. Toll Roads

Two complementary agreements were signed between the Ministry of Public Works of Chile and the concessionaires Ruta de la Araucanía and Ruta de los Ríos. These agreements will involve an estimated investment of UF 1.5 million (close to COP 285 billion) and will include the construction of pedestrian bridges and other improvements. As a result, the term of the concessions will be extended by eight months and nine months for Ruta de la Araucanía and Ruta de los Ríos, respectively.

Meanwhile, the construction of Rutas del Loa is still underway. This project involves the construction of a 136 km extension and is expected to begin operation in 2024.

Financial Results

Table 17: Income Statement – Energy Transmission and Toll Roads

Billion (COP)	2Q 2023	2Q 2022	Δ (\$)	Δ (%)	6M 2023	6M 2022	Δ (\$)	Δ (%)
Total revenue	3,547	3,256	291	8.9%	7,459	6,022	1,437	23.9%
Depreciation, amortization and depletion	278	257	21	8.2%	567	505	62	12.3%
Fixed costs	1,109	1,086	23	2.1%	2,392	1,915	477	24.9%
Total cost of sales	1,387	1,343	44	3.3%	2,959	2,420	539	22.3%
Gross income	2,160	1,913	247	12.9%	4,500	3,602	898	24.9%
Operating expenses	277	233	44	18.9%	610	493	117	23.7%
Operating income (loss)	1,883	1,680	203	12.1%	3,890	3,109	781	25.1%
Financial result, net	(886)	(871)	(15)	1.7%	(1,979)	(1,617)	(362)	22.4%
Share of profit of companies	97	177	(80)	(45.2%)	345	326	19	5.8%
Loss before income tax	1,094	986	108	11.0%	2,256	1,818	438	24.1%
Provision for income tax	(45)	10	(55)	(550.0%)	(54)	(204)	150	(73.5%)
Consolidated net income	1,049	996	53	5.3%	2,202	1,614	588	36.4%
Non-controlling interest	(819)	(792)	(27)	3.4%	(1,747)	(1,282)	(465)	36.3%
Net income attributable to owners of Ecopetrol	230	204	26	12.7%	455	332	123	37.0%
EBITDA	2,395	2,224	171	7.7%	5,107	4,188	919	21.9%
EBITDA Margin	67.5%	68.3%	-	(0.8%)	68.5%	69.5%	-	(1.0%)

⁹ ANEEL reference capex.

Operating income for 2Q23 and 1H23 increased compared to the same periods in 2022, mainly due to: (i) higher energy transmission revenues due to contractual scaling in Peru, Colombia and Chile, a favorable effect of foreign currency revenue translation, and the entry into operation of projects in Brazil and Colombia, offset by the negative effect of contractual scaling in Brazil (IPCA and IGPM); ii) higher toll road revenues with the better performance of road concessions in Chile, the favorable effect of foreign exchange translations and improved performance of the Ruta Costera concession; and iii) higher telecommunications revenues from higher connectivity services sales and incremental capacities in Colombia and the favorable effect of contractual scaling.

Operating costs and expenses in 2Q23 and 1H23 increased compared to 2Q22 and 1H22, respectively, primarily attributed to: i) higher inflation, mainly in Brazil, Chile and Colombia; ii) devaluation of the Colombian peso against the US dollar; iii) the foreign exchange translation effect; iii) the entry into operation of new energy transmission projects and telecommunications contracts; and iv) higher road maintenance activities.

The **net financial result** for 1H23 increased versus 1H22 primarily as a consequence of higher interest on the debt. There were no significant variations in the financial result between 2Q23 and 2Q22.

The result from equity in companies in 1Q23 increased versus that of 1Q22, due to the restatement of the residual value of Ivaí9 in Brazil and the positive performance of contractual scaling.

The **equity method in companies** for 2Q23 decreased compared to 2Q22 due to lower revenues in Taesa and CTEEP, resulting from an unfavourable effect of the contractual escalators in Brazil (IPCA/IGPM). However, there was an increase in participation results for 1H23 compared to 1H22, attributed to the updated performance of the Ivaí concession in Brazil, which was partially offset by the behavior of the contractual climbers.

In terms of income tax, a decrease was observed for 1H23 compared to 1H22, mainly due to the tax effect of debt finance costs, which was partially offset by the effect of better results in 1H23.

4. Pro Forma Accumulated Results by Business Lines as of June, 2023

In line with our "Strategy" objectives for 2040, and with a focus on financial impact, we are reorganizing our current reported segments into the following business lines: i) **Hydrocarbons**: This line includes exploration, production, transportation and logistics, refining, and petrochemicals, ii) **Low Emission Solutions**: This line includes natural gas, biogas, LPG, energy efficiency, renewables, hydrogen, Carbon Capture Usage, and Storage, and iii) **Energy Transmission and Toll Roads**.

In this pro forma statement, the Low Emission Solutions line includes gas and LPG information from Ecopetrol S.A., Hocol, Ecopetrol Permian, Ecopetrol America, the Cartagena Refinery and Invercolsa. As a result, gas that was previously reported in the Exploration and Production segment is now included in the Low Emission Solutions line as its main product. Additionally, LPG that was previously reported in both the Exploration and Production and Refining and Petrochemical segments is now part of the Low Emission Solutions line.

Below, we present the pro forma financial results by business lines accumulated up to June 2023:

Table 18: Proforma financial results by business lines – Ecopetrol Group

Billions (COP)	Current reporting segments				Proforma Business Lines			Total
	Exploration and Production	Refining and Petrochemical	Transportation and Logistics	Energy Transmission and Toll Roads	Hydrocarbons ¹⁰	Low Emission Solutions	Energy Transmission and Toll Roads	
EBITDA ¹¹	16,264	4,610	6,372	5,107	25,178	2,142	5,107	32,427
EBITDA Margin	40.5%	10.8%	79.1%	68.5%	40.6%	47.0%	68.5%	44.3%
Net Income	4,652	1,768	2,872	456	8,780	512	456	9,748
Net Margin	11.6%	4.1%	35.7%	6.1%	14.2%	11.2%	6.1%	13.3%

¹⁰ The hydrocarbons line does not include gas and LPG information from certain Ecopetrol subsidiaries (Ecopetrol S.A., Hocol, Ecopetrol Permian, Ecopetrol América y Refinería de Cartagena), Invercolsa is also excluded.

¹¹ The EBITDA provided in the current reporting segments view does not include \$74MM due to intercompany eliminations.

The results presented here are preliminary and subject to change as more information becomes available. Please note that this information is based on the financial disclosure provided by the business lines. Updates will be made as more information is received.

III. Technology, Environment, Social and Corporate Governance (TESG)

The Ecopetrol Group recognizes that achieving long-term value requires the materialization of sustainable value beyond financial gain. This entails striking a balance between profitability and sustainability. In this sense, the following are the main advances:

Integrated Water Management

The operation reused 38.4 million cubic meters of water (2.65 million barrels per day), meaning that the company avoided capturing and/or discharging this volume, thus reducing pressure on water resources. This figure increased by 20% relative to 1Q22 and is equal to 79% of the total water required to operate during this quarter. These results have been achieved thanks to the implementation of good water reuse and recirculation practices in the Barrancabermeja and Cartagena refineries and the production fields.¹²

During 2Q23, 10.3 million cubic meters of fresh water (0.71 million barrels per day) were captured, 8% more than the volume captured in 2Q22 and 21% of the total water required to operate in Ecopetrol. The increased volume of water captured is due to a higher crude oil throughput in the refineries, which consequently generated a higher water volume requirement for this process.

In the same period, close to 1.15 million cubic meters of treated production water was reused in the Castilla and Rubiales fields (an average of 79 thousand barrels per day) for irrigation of agroforestry and palm oil crops, respectively, representing an increase of 23% versus 2Q22. This is primarily due to the entry into operation of the SAARA pilot by its acronym in Spanish (water system for agricultural reuse) in the Rubiales field during the first half of 2023, reusing treated production water to irrigate palm oil crops in the municipality of Puerto Gaitán (Meta).

Climate Change - Decarbonization

By the end of 2023, the Ecopetrol Group estimates it will have reduced its greenhouse gas emissions (GHG) by 407,040 tCO_{2e} through initiatives and projects related to energy efficiency, renewable energies, gas utilization, and reduction of fugitive emissions and venting. In 1H23, a reduction of 183,695 tCO_{2e} was achieved, reaching 45% compliance of the target.

Additionally, within the commitment acquired by Ecopetrol with the United Nations Climate and Clean Air Coalition (CCAC), the annual report of total methane emissions was prepared under the OGMP 2.0 framework (Oil and Gas Methane Partnership). The report on gas flaring was also completed, in compliance with the obligations established under the World Bank's Zero Routine Flaring initiative. Total gas flaring of 10.07 million cubic feet was reported in 2022, of which 6.67 million cubic feet are from routine flaring.

Biodiversity

Two pilots based on the LEAP Process for Nature-related Risk & Opportunity Assessment of the Task Force on Nature-Related Financial Disclosures (TNFD) were conducted. The first pilot was done within an advisory project for the Yarigui Cantagallo field in the Mid Magdalena Valley and the second was developed using a socio-ecological resilience tool built under the FIBRAS agreement with the Alexander Von Humboldt Institute and was applied in four nuclei of the operation. These pilots were sent to the TNFD for feedback.

¹² In terms of best practices, the reuse/recirculation of water in refineries is noteworthy, mainly in condensate recovery and firefighting systems. Likewise, in the production fields, reuse/recirculation practices are highlighted in: i) drilling activities that reuse domestic and industrial wastewater after tertiary treatments (reverse osmosis and demineralization); ii) preparation of drilling mud; iii) equipment washing; iv) use of cooling water for pumps and industrial uses; v) re-injection to maintain reservoir pressure or increase hydrocarbon production.

In line with the Business Group's objective to establish five additional eco-reserves to the 15 already recognized and meet the target of a total of 20 eco-reserves by 2023, it was decided in 2Q23 that two eco-reserves will be provided by Ocesa in the department of Boyacá, two by the Central Regional Production Vice Presidency in the Mid Magdalena Valley and one by the Colombian Petroleum Institute in Piedecuesta, in the department of Santander.

Within the NBSAP (National Biodiversity Strategy and Action Plan) and the country's pledge to implement of Kunming-Montreal Global Biodiversity Framework, Ecopetrol has been contributing to building the "*Biodiversidad + Empresa*" (Biodiversity + Company) roadmap. For the launch of this roadmap project in June, the Company participated in a panel regarding the sector's progress on biodiversity management issues.

Environmental Planning and Authorizations

During 2Q23, Ecopetrol S.A. obtained 22 environmental approvals to develop its projects and operations (four from the national environmental licensing authority, ANLA, and 18 from regional environmental corporations, CARs). The most significant are i) the appeal process against Resolution 0045 of January 17, 2023- Modification of the Environmental License of the Cusiana T (Piedemonte) Wells; and ii) the environmental license for the Flamenco development project (central region).

The above is the result of environmental planning in the projects to safely execute activities associated with well drilling and the efficient use of natural resources. Additionally, in 2Q23, four environmental authorizations have been obtained through the legal process called "minor change" with rulings issued by the environmental authority. Furthermore, 57 processes have been filed with national and regional environmental authorities (49 with ANLA and 8 with CARs).

In order to comply with mandatory requirements associated with the requisite 1% investment and compensation of the biotic component, Ecopetrol has continued to implement voluntary conservation agreements with land owners and/or title holders to preserve natural habitats that may be at risk of intervention. As of the first half of 2023, 25 new agreements have been signed and 624 agreements remain in force, and consequently, 168.31 new hectares of conserved forest were included in this period, for a cumulative total of 4,718.9 hectares conserved.

Operational Incidents Result in Hydrocarbon Spills and Environmental Impact

During the second quarter of 2023, Ecopetrol reported an incident at the Cartagena Refinery resulting in the spillage of 8.47 barrels of hydrocarbon, impacting the environment. This represents a significant reduction of 85.2% compared to the same period in the previous year, in which two incidents resulted in the spillage of 57.3 barrels of hydrocarbon and had a greater impact on the environment.

Circular Economy

Seeking to position the Ecopetrol Group as a circular economy benchmark for transportation infrastructure and sustainable mobility of Bogotá D.C., during 2Q23 Ecopetrol and MPI, a company specialized in asphalt modification, accomplished the first export of asphalt modified with recycled plastic in Colombia. The export destination was Central America, where a shipment of 350 tons of asphalt produced at the Refinería de Barrancabermeja was sent in solid form, which incorporated more than 300 kilos of recycled plastic, equal to approximately 1.2 million plastic bags. This milestone opens the possibility for other countries in the region to integrate this technology into road construction projects.

Likewise, the modified asphalt with post-consumer recycled plastic initiative continues its massification process, and a new milestone was reached in partnership with El Dorado Airport, MPI and Dromos, as this product was employed to pave 680 m² of an air terminal taxiway, the first time this product is used in an airport in the country and fulfilling all technology parameters required by the Colombian Aeronautical Regulations. For this project, an asphalt mixture containing 338 kg of recycled plastic was used, equal to 200,000 plastic bags, an item that has disadvantages such as poor recycling, misuse, and difficulty to be degraded, and thus is a large pollutant in the ecosystem. To date, nine stretches of road have been paved with this asphalt.

In line with the Ecopetrol Group's decarbonization strategy and to propel the energy transition and circular economy in the region, the following milestones were particularly noteworthy in 2Q23:

- A relevant milestone was the **Carbon Trading Desk's** sale of the first shipments of Apiay Blend carbon offset crude (close to 3 million barrels) through the Ecopetrol Trading Asia office, destined for India. This sale will offset close to 118 thousand tons of CO₂e.
- In April, a shipment of 16,218 tons of **asphalt** was sold from the port of Barranquilla to Guayanilla, Puerto Rico. This operation marked a milestone as it was the largest sale of asphalt in the company's history and was carried out through the largest asphalt tanker ever serviced from the port of Barranquilla. This has expanded marketing opportunities for the country and is a significant achievement.
- On the **Solvents** front, the first exports of 320 tons of Ecospirit-40 were made to Peru and Central America; this milestone corresponds to a new, cleaner and more efficient product reference for paint preparation.

Social and Environmental Investment

In order to fulfill the high goals it has set for itself in its strategic vision, the Ecopetrol Group's Environmental Management Strategy was updated and has evolved into a Strategy for the comprehensive Management of the Territory. Its objective is to establish the guidelines by which the Group companies must contribute to territorial development and business sustainability through the construction of relationships of trust, social dialogue, the responsible development of the value chain of each business line, and the execution of investments to generate shared prosperity, within a framework of respect and promotion of human rights.

At the end of 2Q23, the Ecopetrol Group allocated resources totaling COP 170,580¹³ million to execute the Sustainable Territorial Development Portfolio. This portfolio includes strategic and mandatory social and environmental investments that contribute to the company's relationships with the community. By the end of 2023, investments are expected to total COP 766 billion, a figure equal to nearly 5% of the comparable¹⁴ investment by the Nation's General Budget, focused on transportation, education, agriculture, and rural development, trade, mines and energy, and potable water and basic sanitation.

Through these investments, the Ecopetrol Group contributes to the economic and social development of the country, executing joint projects with local authorities and the community and hand in hand with national and international cooperation partners to generate well-being and contribute to the closing of social gaps.

Milestones for the quarter include:

Education, sports and health

- As part of the strategy to encourage the expansion of higher education coverage, through the *Bachilleres Ecopetrol Mario Galán Gómez* program, 94 new scholarships were awarded to students from all departments of the country. Throughout the program's history, 1,760 low-income young people from rural areas who have excelled with high academic performance have benefitted from this program. With this program, Ecopetrol contributes to the fulfillment of the National Government's goals to expand higher education coverage from 53.94% to 62% by 2026, in addition to the other alliances in force.
- In order to promote school retention, school furniture, teaching elements and kitchenware for school cafeterias were delivered to 40 public schools in the municipalities of Aipe and Palermo (Huila), benefiting more than 4,900 students. The project has an impact on 10.8% of the schools that receive the School Meal Plan and 4% of the students in the department.
- More than 400 children and young people from the department of Casanare participated in three cultural shows in the municipalities of Yopal, Aguazul and Tauramena as part of the Batuta-Ecopetrol musical introductory program. In the department of Casanare, the dropout rate is 2.11%; this intervention requires the children in the music schools to be enrolled in formal education, ensuring a 99% enrollment rate.

¹³ The accumulated investment of the Ecopetrol Group to 2T23 is divided into: i) Strategic investment by COP 145,966 million and ii) Mandatory investment by COP 24,614 million. As part of the strategic value includes the execution in 2023 of the projects of Works by Taxes of Ecopetrol S.A. that corresponds to COP 5,001 million.

Accumulated social, environmental and relationship investment Ecopetrol S.A.: COP 123,864 million.

Subordinated: COP 46,716 million.

¹⁴ For comparative purposes includes National Government sectorial programs which have relation or similar social investments lines with Ecopetrol.

- As part of the implementation of the Mobile Health Unit, which facilitates access to low-complexity health services for the vulnerable population of the Mid Magdalena region, a total of 6,501 vulnerable people received the services.

Inclusive rural development

- In order to strengthen the *Meta's food supply network (RED)*, the second phase of this partnership with the Food and Agriculture Organization of the United Nations (FAO) was launched. Over the next three years, the aim is to benefit 3,000 farming families, 32 producer organizations, 14 agroindustries, and 247 enterprises to achieve sales of more than COP 13.4 billion through the *RED* and its affiliates. The project has become a regional and international benchmark and contributes directly to meeting the National Development Plan 2022-2026 goals.
- The Third Oil and Agriculture Forum was held in the municipality of Villavicencio, (Meta) to present the results of the sustainable agribusiness *MAS Meta* model in an alliance between Ecopetrol and the Universidad de Los Andes University, with the participation of 320 farming families that are developing agribusinesses in cocoa, coffee and fruit trees, with sales of over COP 370 million in the last year. In addition, *ECO Chocolates* and the training platform *MAS Meta Campus* were launched.
- The comprehensive agricultural and livestock solutions program, AGROSOL, which aims to help strengthen family agriculture, food security and recover the productive vocation of the rural population, with more than 2,840 farming families in over 20 municipalities joining since 2021.

Public and community infrastructure

- Seeking to intervene in 3% of the department's secondary and tertiary road infrastructure network by 2040, Ecopetrol, in partnership with industry companies,¹⁵ the department of Meta and the Instituto Nacional de Vías (INVIAS), signed a strategic alliance to pave 43 km of the road that leads from Puerto Gaitán to the village of Rubiales in Meta. This regional impact investment, which amounts to COP 244,690 million, to which Ecopetrol contributes COP 214,784 million, seeks to promote productive and rural development in the Orinoco region, priming over one million hectares with agricultural development potential in addition to improving access to education and health services for the region's inhabitants and generating a positive annual impact on the regional GDP surpassing 2.5% per year.

Entrepreneurship and business development:

- The national symposium of the entrepreneurship *Ecopetrol Emprende* program was held in partnership with the incubator *Créame Incubadora de Empresas* and the participation of 1,576 entrepreneurs and MSMEs from 45 municipalities, who will be the 2023 beneficiaries.
- As part of the *Ecopetrol Emprende* program in Barrancabermeja, the transfer of methodologies to generate regional competencies for implementing business development programs at the BIT (Innovation & Technology Center of the Barrancabermeja mayor's office) was completed.

Access to public services

- 5,242¹⁶ new homes were certified with gas service connections in the district of Barranquilla (Atlántico) and the municipalities of San Vicente de Chucurí (Santander) and Aguazul (Casanare).
- Within the framework of the *Gas Social* program, the aim is to connect by 2040, 300,000 families to home gas service, seeking to impact those households in Colombia that still cook with firewood (1.7 million).
- Furthermore, within Work for Taxes mechanism, 27 new projects were allocated to the Ecopetrol Group by the Territorial Renewal Agency (ART) for the 2022 tax year totaling COP 167 billion, the highest allocation for the Ecopetrol Group as off today. In this way, the Ecopetrol Group continues to be the largest participant in this program, having been awarded 37% of the national allocation with 86 total projects and an aggregate investment of COP 725 billion. Likewise, Ecopetrol completed the paving of 3.23 km of urban roads in the municipality of Paz de Ariporo (Casanare), for an investment of COP 9.300 billion, benefiting 11,172

¹⁵ Frontera Energy, Tecpetrol, CEPSA, Hocol

¹⁶ Correspond to certified connections

residents of the Siete de Agosto, Panorama, La Esperanza and El Triunfo neighborhoods.

Likewise, CENIT provided training programs to 19 Community Action Boards in the tourism district of Santa Marta (Magdalena) and 93 productive units in the departments of Magdalena and Arauca. Esenttia carried out the outfitting of a new playground in the southwestern area of Cartagena, completed two new bridges in the town of Pasacaballos, new signage with the name of the community of Ciudad Bicentenario and in Tocancipá, where Esenttia is assembling a plant to transform post-consumer resins. The assets delivered use over 6,700 kilograms of recovered plastic purchased from recyclers. In addition, Hocol connected 249 households to gas services in the municipality of Purificación (Tolima).

During 2Q23, Ecopetrol executed environmental investments for COP 9,995 million, of which COP 5,733 million are mandatory investments and COP 4,261 million are strategic investments.

The mandatory environmental investment in 2Q23 included: i) the restoration and conservation of biodiversity in the eastern region; ii) the definition of conservation agreements aimed at nature-based strategies and the conservation of threatened mammals in the Cusiana River hydrographic subzone; and iii) the creation of programs and maintenance services for protective reforestation, landscape recovery and other conservation-oriented management measures to comply with legal environmental obligations in the Piedemonte of the Llanos region.

In terms of strategic environmental investments during 2Q23, the following are worth highlighting: i) the development of the methodology to estimate carbon emission reductions in wetlands, including a baseline for carbon monitoring, the report of the carbon pilot project, a final plan for obtaining plant material and progress in the planting and upkeep of trees planted in the regions selected by the project; ii) sustainability socio-ecological planning, which includes the analysis of potential green businesses and ecotourism initiatives in the project's study areas, the definition of the eco-reserves network in Ecopetrol's areas of interest, methodology and guidelines for assessing spill impacts based on genomics techniques, defining an agenda with regional research priorities for strengthening biodiversity management and informed decision making, and workshops to communicate project results with multiple stakeholders; and iii) the management of conservation, biodiversity and ecosystem services of the Ecopetrol Group's eco-reserves.

Communities and territories

Community Outreach: 53 dialogues were held nationally, sponsored by Ecopetrol, leading to 13 processes with the participation of Community Action Boards, social organizations, academia, local businesses, and local territorial public sector institutions.

During 2Q23, Cenit carried out 283 activities with authorities and communities in the territories of interest to the Company, strengthening social dialogue and promoting initiatives to assist with regional development.

Ethnic relations

- Between June 26 and 28, the President of Ecopetrol accompanied the President of Colombia on his visit to the department of La Guajira. In this visit, Ecopetrol committed to supporting education in the region, as well as sponsoring projects and solutions to ensure water supply to the Wayuu indigenous communities.
- In the modification of the environmental license for the Rubiales field, the prior consultation with the Alto Unuma Meta Resguardo (RAUM) reservation of Puerto Gaitán began, and a permanent intercultural dialogue forum was created under the framework of the integrated territorial management strategy.
- The Company began discussions with the Wayuu communities regarding the necessary actions for the prior consultation processes for the *Orca Desarrollo* project, which will provide gas from the Orca well to the Guajira Association's facilities.
- In the second quarter, we initiated the ethnic inclusiveness support program called *Formando en la Diversidad* in the departments of La Guajira and Putumayo, training 250 people from the Wayuu and Pasto Siberia indigenous communities online and on-site to strengthen their individual, group, organizational, and community competencies.

Energy transition

Ecopetrol plays a leading role in Colombia's fair energy transition agenda and is exploring other outreach models of community shareholding in renewable energy projects, as a way to implement energy communities. In this manner, it collaborates with the Institute for Planning and Promotion of Energy Solutions for Non-Interconnected Zones (IPSE), the Mining-Energy Planning Unit (UPME), Hocol, and Cenit in a task force led by the Ministry of Mines and Energy seeking to define a portfolio of initiatives that can develop into self-sustaining energy communities. For 2023, the following projects were prioritized and are in the planning and analysis stage: i) Energy Community Cabo de la Vela; ii) Energy Community Puerto Guzman; iii) Energy Community Resguardo Alto Unuma (under assessment).

Science, Technology, and Innovation

During 1H23, the Company continued the path to incorporate cutting-edge knowledge as well as technology and innovation, capturing benefits of USD 238 million through digital transformation and high-tech research and development projects.

Of the benefits captured, 30% were on the **digital transformation** front, totaling USD 73.2 million at the end of 1H23, presenting an increase of 65% versus 1H22 (USD 44.3 million). Within the digital solutions implemented by Ecopetrol and Group subsidiaries, the following stand out:

- STORM, a platform that allows standardizing and centralizing the Ecopetrol Group's product sales and logistics processes, was implemented. During the first month of operation, 99.98% (USD 790 million) of all products were invoiced, with a noted reduction in the margin of error in accounting, automation of operational reports, and improvements in response times. This platform is key to the international expansion of the Ecopetrol Group's marketing and sales efforts.
- Deployment of the industrial platform ROMSS, an initiative that improves the inventory, movements, and balances of the Refinería de Barrancabermeja, and provides daily and timely laboratory quality information on tank levels and volumetric balances of the refinery.
- The Digital Programmer was implemented to optimize the integrated programming of the Ecopetrol Group's value chain. This solution reduces operating costs, optimizes hydrocarbon inventories, and mitigates chain operating risks by identifying, analyzing, and selecting the best alternatives.
- Execution of the 5G technology pilot test was successfully performed at the Refinería de Barrancabermeja, in partnership with the Ministry of Information and Communications Technologies and Claro Colombia, providing technical assistance from anywhere in the world in real-time, with the help of devices such as intrinsically safe smart glasses and cell phones. Likewise, video analytics was used to monitor restricted areas and data transfer to know test results in real-time. The use of 5G optimizes processes and minimizes industrial risks. This partnership is key to determining the final implementation of this technology and its possible massification to the region and the country.

On the **research and technological development** front, benefits of USD 164.8 million were achieved by the end of 2Q23; among the chief outcomes of this period are:

- In integrated **water management**, a model was generated that includes an overview of the most relevant hydrogeological factors of the Mid Magdalena Valley and the potential of the deepest aquifer units, where Ecopetrol notes opportunities to supply the requirements of secondary and improved recovery projects. Likewise, this model allows for identifying the water resource quality in the deep aquifers and understanding the water recharge processes, hence helping to protect reserves and the sustainability of the production curves.
- In the **circular economy** front, the experimental phase in the nursery was successfully completed for the use of nano fertilizers in palm species, with increases of over 40% in biomass generation yield and the potential for CO₂ capture. Additionally, employing a three-dimensional oleophilic membrane technology developed by the Colombian Petroleum Institute (ICP), successful results were achieved in tests carried out in the Chichimene and CPO-9 fields to improve injection waters, positively impacting recovery factors, safeguarding clean barrels and a TESP operation.
- Progress is being made to identify available technologies to include in the **renewable energy matrix**, highlighting offshore wind energy as the most promising energy source and technology available. The

latter has the potential to boost the production of green hydrogen at sea, with an advantage in both cost of energy and cost of hydrogen for possible export.

- As part of the **energy transition** assessment, progress is ongoing in estimating the potential for the geological storage of CO₂ and analyzing the effectiveness of this storage as an alternative to reduce the environmental impact of operations. The Mid Magdalena Valley and the Eastern Region (Chichimene and Castilla) have shown potential in this regard.

Regarding **innovation, ecosystems, and partnerships**, in 2Q23 the Ecopetrol Group expanded its Econova Innovation Network, with progress levels of 50% in the deployment of Econova Bogota and 25% for Econova Meta. These innovation centers are advancing in the conceptual engineering of the spaces and adapting the infrastructure for the first stage launch in 4Q23. These centers will concentrate on Revolution 5.0 and Biodiversity, respectively, and will be the third and fourth in Ecopetrol's innovation network. The Econova Network by 2Q23 has launched 12 industry challenges, impacted more than 370 companies, incubated close to 20 ventures, and accelerated approximately 10 companies.

Concerning **intellectual property**, three patents were obtained in 2Q23 in Colombia, two associated with water injection and well-stimulation methods and equipment. The other, a product of open innovation in alliance with the company GEOSIS S.A., consists of an interactive system to visualize objects on screen in real-time, which is applied in crude oil production exploration and drilling processes for the remote analysis of source rocks.

Corporate Governance and Corporate Bodies

Corporate Responsibility. Ecopetrol completed the first phase in the implementation of the human rights (HR) risk management cycle with the Orinoco Regional and Andean East Regional Vice Presidencies. The two processes involved multiple stakeholders - workers, suppliers, contractors and community leaders - and apply a bidirectional and differential approach. As a result of this exercise, action plans will be defined for those risks and impacts identified.

Board of Directors. The Board of Directors of Ecopetrol S.A. adopted the following key decisions during 2Q23, among others:

- Appointed Ricardo Roa Barragán as President of Ecopetrol, who took office on April 24, 2023.
- Approved the consolidated financial statements of the Ecopetrol Group and individual financial statements of Ecopetrol S.A. for 1Q23 and 2Q23¹⁷.
- Approved the maximum 2023 salary increase to be agreed in the Collective Bargaining Agreement for those workers subject thereto and the annual 2023 salary increase for the workers covered by Agreement 01.
- Approved the proposal to update the capital discipline criteria for preparing the portfolio, as well as the price assumptions and macroeconomic variables.

Corporate Governance. During this quarter, the annual training program for the Board of Directors of Ecopetrol S.A. (BoD) was structured and put into operation. The Board of Directors plays the role of strategic advisor for the Group and serves as the benchmark for best corporate governance practices, which apply to other Group Boards of Directors. As a result of the new make-up of the BoD, a program was designed with partners including the Harvard Business School, Kellogg School of Management, among other leading international institutions, to provide cutting-edge knowledge in corporate governance practices, the effective management of boards of directors, energy transition, and TESG, among other topics associated with the boards of directors as an essential component for teamwork, collaboration, unity of purpose and direction within the Ecopetrol Group.

¹⁷ Approved at the July 28, 2023 BoD Session

IV. Presentation of Results

On Wednesday, August 9th, 2023, Ecopetrol's senior management will host a conference call to present the Company's results, offered in both Spanish and English. Please find below the times and links to access the calls:

Conference Call
09:00 a.m. Colombia time
10:00 a.m. New York time

To access the webcast, the following link will be available:

<https://xegmenta.co/ecopetrol/conferencia-de-resultados-2t-2023/>

Once you receive the invitation, you will find the link for the Spanish webcast and the link for the English webcast.

Participants will be able to ask questions using the webcast platform once the transmission of the call starts.

The earnings release, slide presentation, live webcast and recording of the conference call will be available on Ecopetrol's website: www.ecopetrol.com.co.

Please verify the functioning of the webcast platform in your browser in advance of the call. We recommend the use of the latest versions of Internet Explorer, Google Chrome, and Mozilla Firefox.

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Ecopetrol Group Appendices

Billion (COP)	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Revenue						
Local	17,211	22,185	(22.4%)	37,476	38,798	(3.4%)
Export	17,089	21,700	(21.2%)	35,678	37,560	(5.0%)
Total revenue	34,300	43,885	(21.8%)	73,154	76,358	(4.2%)
Cost of sales						
Depreciation, amortization and depletion	3,239	2,725	18.9%	6,248	5,305	17.8%
Variable depreciation, amortization and depletion	1,949	1,622	20.2%	3,692	3,129	18.0%
Fixed cost depreciation	1,290	1,103	17.0%	2,556	2,176	17.5%
Variable costs	13,718	16,343	(16.1%)	29,065	28,408	2.3%
Imported products	5,866	8,643	(32.1%)	12,941	16,328	(20.7%)
Local purchases	5,533	7,096	(22.0%)	11,487	12,627	(9.0%)
Hydrocarbon transportation services	371	314	18.2%	745	568	31.2%
Inventories and others	1,948	290	571.7%	3,892	(1,115)	(449.1%)
Fixed costs	4,530	4,010	13.0%	8,952	7,303	22.6%
Contracted services	1,185	1,073	10.4%	2,274	1,986	14.5%
Construction services	592	635	(6.8%)	1,343	1,054	27.4%
Maintenance	1,059	953	11.1%	1,993	1,660	20.1%
Labor costs	1,006	835	20.5%	1,969	1,618	21.7%
Other	688	514	33.9%	1,373	985	39.4%
Total cost of sales	21,487	23,078	(6.9%)	44,265	41,016	7.9%
Gross income	12,813	20,807	(38.4%)	28,889	35,342	(18.3%)
Operating expenses	2,314	2,199	5.2%	4,670	4,205	11.1%
Administration expenses	2,065	1,752	17.9%	4,171	3,661	13.9%
Exploration and projects expenses	249	445	(44.0%)	499	538	(7.2%)
(Recovery) expense for impairment long-term assets	0	2	(100.0%)	0	6	(100.0%)
Operating income	10,499	18,608	(43.6%)	24,219	31,137	(22.2%)
Finance result, net	(2,044)	(1,991)	2.7%	(3,549)	(3,514)	1.0%
Foreign exchange, net	299	(186)	(260.8%)	547	(139)	(493.5%)
Interest, net	(1,230)	(1,155)	6.5%	(2,415)	(2,095)	15.3%
Financial income/loss	(1,113)	(650)	71.2%	(1,681)	(1,280)	31.3%
Share of profit of companies	155	237	(34.6%)	497	439	13.2%
Income before income tax	8,610	16,854	(48.9%)	21,167	28,062	(24.6%)
Income tax	(3,336)	(5,309)	(37.2%)	(8,929)	(9,193)	(2.9%)
Net income consolidated	5,274	11,545	(54.3%)	12,238	18,869	(35.1%)
Non-controlling interest	(1,187)	(1,075)	10.4%	(2,490)	(1,826)	36.4%
Net income attributable to owners of Ecopetrol	4,087	10,470	(61.0%)	9,748	17,043	(42.8%)
EBITDA	14,585	22,211	(34.3%)	32,427	38,106	(14.9%)
EBITDA margin	42.5%	50.6%	(8.1%)	44.3%	49.9%	(5.6%)

Table 2: Statement of Financial Position - Ecopetrol Group

Billion (COP)	June 30, 2023	March 31, 2023	Δ (%)
Current assets			
Cash and cash equivalents	11,325	15,497	(26.9%)
Trade and other receivables	42,800	47,654	(10.2%)
Inventories	10,296	11,123	(7.4%)
Current tax assets	8,193	7,076	15.8%
Other financial assets	911	1,684	(45.9%)
Other assets	3,078	3,263	(5.7%)
Total current assets	76,603	86,297	(11.2%)
Non-current assets held for sale	35	42	(16.7%)
Total current assets	76,638	86,339	(11.2%)
Non-current assets			
Investments in associates and joint ventures	9,123	9,487	(3.8%)
Trade and other receivables	31,888	32,794	(2.8%)
Property, plant and equipment	95,609	99,582	(4.0%)
Natural and environmental resources	43,789	43,636	0.4%
Assets by right of use	564	594	(5.1%)
Intangibles	16,131	17,543	(8.0%)
Deferred tax assets	12,069	15,274	(21.0%)
Other financial assets	808	558	44.8%
Goodwill and Other assets	6,426	6,555	(2.0%)
Total non-current assets	216,407	226,023	(4.3%)
Total assets	293,045	312,362	(6.2%)
Current liabilities			
Loans and borrowings	17,101	16,257	5.2%
Trade and other payables	32,351	43,037	(24.8%)
Provision for employees benefits	2,595	2,872	(9.6%)
Current tax liabilities	8,609	9,973	(13.7%)
Accrued liabilities and provisions	1,197	1,413	(15.3%)
Other liabilities	1,316	1,965	(33.0%)
Liabilities related to non-current assets held for sale	0	0	-
Total current liabilities	63,169	75,517	(16.4%)
Non-current liabilities			
Loans and borrowings	90,959	100,105	(9.1%)
Trade and other payables	1,303	51	2,454.9%
Provision for employees benefits	9,131	9,439	(3.3%)
Non-current taxes	13,467	13,740	(2.0%)
Accrued liabilities and provisions	11,220	11,408	(1.6%)
Other liabilities	2,303	2,426	(5.1%)
Total non-current liabilities	128,383	137,169	(6.4%)
Total liabilities	191,552	212,686	(9.9%)
Equity			
Equity attributable to owners of the company	74,832	72,608	3.1%
Non-controlling interests	26,661	27,068	(1.5%)
Total equity	101,493	99,676	1.8%
Total liabilities and equity	293,045	312,362	(6.2%)

Table 3: Cash Flow Statement - Ecopetrol Group

Billion (COP)	2Q 2023	2Q 2022	6M 2023	6M 2022
Cash flow provided by operating activities				
Net income attributable to owners of Ecopetrol S.A.	4,087	10,470	9,748	17,043
Adjustments to reconcile net income to cash provided by operating activities				
Non-controlling interests	1,187	1,075	2,490	1,826
Income tax	3,336	5,309	8,929	9,193
Depreciation, depletion and amortization	3,362	2,856	6,524	5,565
Foreign exchange (gain) loss	(299)	186	(547)	139
Gain on other comprehensive Income realized	0	0	0	0
Finance costs recognized in profit or loss	2,297	1,973	4,655	3,523
Dry wells	118	377	265	438
Loss (gain) on disposal of non-current assets	14	11	22	306
Impairment of current and non-current assets	37	15	60	41
Fair value (gain) on financial assets valuation	(58)	(61)	(115)	(103)
Gain on financial derivatives	(1)	(11)	0	(11)
Gain on assets for sale	12	12	13	10
(Gain) loss on share of profit of associates and joint ventures	(155)	(237)	(497)	(439)
Exchange difference on export hedges and ineffectiveness	206	157	725	292
Provisions and contingencies	40	118	241	179
Others minor items	11	27	4	4
Net changes in operating assets and liabilities	(6,369)	(12,767)	(20,659)	(23,012)
Income tax paid	(4,686)	(3,356)	(6,649)	(5,054)
Cash provided by operating activities	3,139	6,154	5,209	9,940
Cash flows from investing activities				
Investment in joint ventures	0	(33)	0	(65)
Acquisition of subsidiaries, net of cash acquired	0	0	0	0
Investment in property, plant and equipment	(1,919)	(1,867)	(3,550)	(3,094)
Investment in natural and environmental resources	(3,421)	(2,532)	(6,738)	(4,490)
Payments for intangibles	(214)	(187)	(420)	(357)
(Purchases) sales of other financial assets	486	771	1,237	1,170
Interest received	459	177	1,013	336
Dividends received	82	179	186	179
Proceeds from sales of assets	22	29	30	80
Net cash used in investing activities	(4,505)	(3,463)	(8,242)	(6,241)
Cash flows from financing activities				
Proceeds (repayment of) from borrowings	2,117	(54)	5,678	(331)
Interest paid	(1,874)	(1,532)	(3,196)	(2,439)
Lease Payments	(136)	(115)	(261)	(205)
Return of capital	(12)	(7)	(12)	(7)
Dividends paid	(2,334)	(5,692)	(2,561)	(5,965)
Net cash used in financing activities	(2,239)	(7,400)	(352)	(8,947)
Exchange difference in cash and cash equivalents	(567)	814	(691)	802
Net (decrease) increase in cash and cash equivalents	(4,172)	(3,895)	(4,076)	(4,446)
Cash and cash equivalents at the beginning of the period	15,497	13,999	15,401	14,550
Cash and cash equivalents at the end of the period	11,325	10,104	11,325	10,104

Table 4: EBITDA Reconciliation - Ecopetrol Group

Billion (COP)	2Q 2023	2Q 2022	6M 2023	6M 2022
Net income attributable to the owners of Ecopetrol	4,087	10,470	9,748	17,043
(+) Depreciation, amortization and depletion	3,362	2,856	6,524	5,565
(+/-) Impairment of long-term assets	7	2	7	6
(+/-) Financial result, net	2,044	1,991	3,549	3,514
(+) Income tax	3,336	5,309	8,929	9,193
(+) Taxes and others	562	508	1,180	959
(+/-) Non-controlling interest	1,187	1,075	2,490	1,826
Consolidated EBITDA	14,585	22,211	32,427	38,106

Table 5: Reconciliation of EBITDA by Segment (2Q23)

Billion (COP)	Upstream	Downstream	Midstream	Energy	Eliminations	Consolidated
Net income attributable to the owners of Ecopetrol	1,962	470	1,425	230	0	4,087
(+) Depreciation, amortization and depletion	2,056	572	371	363	0	3,362
(+/-) Impairment of long-term assets	0	6	0	1	0	7
(+/-) Financial result, net	814	298	13	886	33	2,044
(+) Income tax	2,539	(240)	992	45	0	3,336
(+) Other taxes	251	218	42	51	0	562
(+/-) Non-controlling interest	(24)	49	343	819	0	1,187
Consolidated EBITDA	7,598	1,373	3,186	2,395	33	14,585

Table 6. Investment by Segment Ecopetrol Group (1H23)

Millions (USD)	Total al 1H23	Ecopetrol S.A.	Affiliates and subsidiaries	Total
Production		937	754	1,691
Exploration		110	42	152
Downstream		76	31	107
Midstream*			137	137
Corporate**		60	2	63
Ecopetrol		1,183	966	2,149
Energy transmisión		-	404	404
Toll roads		-	101	101
Telecommunications		-	14	14
ISA		-	518	518
Total		1,183	1,484	2,667

* Includes total amount of investments in each of the subsidiaries and affiliates of Ecopetrol Group (both controlling and non-controlling interests).

** Includes investments in energy transition projects.

Ecopetrol S.A. Appendices

Following are the Income Statement and Statement of Financial Position of Ecopetrol S.A.

Table 7: Income Statement

Billion (COP)	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Local	17,180	20,599	(16.6%)	36,606	35,804	2.2%
Exports	12,295	16,471	(25.4%)	23,769	28,558	(16.8%)
Total revenue	29,475	37,070	(20.5%)	60,375	64,362	(6.2%)
Variable costs	19,356	19,510	(0.8%)	38,751	34,777	11.4%
Fixed costs	3,888	3,345	16.2%	7,635	6,387	19.5%
Total cost of sales	23,244	22,855	1.7%	46,386	41,164	12.7%
Gross income	6,231	14,215	(56.2%)	13,989	23,198	(39.7%)
Operating expenses	1,069	1,022	4.6%	2,201	1,816	21.2%
Operating income	5,162	13,193	(60.9%)	11,788	21,382	(44.9%)
Financial income/loss	(1,399)	(1,251)	11.8%	(2,206)	(1,919)	15.0%
Share of profit of companies	2,618	2,703	(3.1%)	6,115	4,395	39.1%
Income before income tax	6,381	14,645	(56.4%)	15,697	23,858	(34.2%)
Income tax	(2,294)	(4,175)	(45.1%)	(5,949)	(6,815)	(12.7%)
Net income attributable to owners of Ecopetrol	4,087	10,470	(61.0%)	9,748	17,043	(42.8%)
EBITDA	7,048	15,031	(53.1%)	15,448	24,896	(38.0%)
EBITDA margin	23.9%	40.50%	(16.6%)	25.60%	38.70%	(13.1%)

Table 8: Statement of Financial Position / Balance Sheet

Billion (COP)	June 30, 2023	March 31, 2023	Δ (%)
Current assets			
Cash and cash equivalents	3,658	3,986	(8.2%)
Trade and other receivables	36,547	42,968	(14.9%)
Inventories	6,349	7,074	(10.2%)
Current tax assets	6,400	5,726	11.8%
Other financial assets	3,393	5,002	(32.2%)
Other assets	1,944	1,962	(0.9%)
	58,291	66,718	(12.6%)
Non-current assets held for sale	22	34	(35.3%)
Total current assets	58,313	66,752	(12.6%)
Non-current assets			
Investments in associates and joint ventures	84,346	87,939	(4.1%)
Trade and other receivables	419	442	(5.2%)
Property, plant and equipment	28,591	27,968	2.2%
Natural and environmental resources	26,365	25,889	1.8%
Assets by right of use	2,992	3,038	(1.5%)
Intangibles	376	326	15.3%
Deferred tax assets	5,748	9,011	(36.2%)
Other financial assets	30	193	(84.5%)
Goodwill and other assets	1,366	1,302	4.9%
Total non-current assets	150,233	156,108	(3.8%)
Total assets	208,546	222,860	(6.4%)
Current liabilities			
Loans and borrowings	11,740	12,651	(7.2%)
Trade and other payables	29,857	38,729	(22.9%)
Provision for employees benefits	2,336	2,591	(9.8%)
Current tax liabilities	6,292	6,857	(8.2%)
Accrued liabilities and provisions	801	1,002	(20.1%)
Other liabilities	831	1,428	(41.8%)
Total current liabilities	51,857	63,258	(18.0%)
Non-current liabilities			
Loans and borrowings	63,741	68,622	(7.1%)
Provision for employees benefits	8,621	8,925	(3.4%)
Non-current tax liabilities	538	446	20.6%
Accrued liabilities and provisions	8,645	8,675	(0.3%)
Other liabilities	312	326	(4.3%)
Total non-current liabilities	81,857	86,994	(5.9%)
Total liabilities	133,714	150,252	(11.0%)
Equity			
Equity attributable to owners of the company	74,832	72,608	3.1%
Total equity	74,832	72,608	3.1%
Total liabilities and equity	208,546	222,860	(6.4%)

Table 9: Export Destinations - Ecopetrol Group

Crudes - mboed	2Q 2023	2Q 2022	% Share	6M 2023	6M 2022	% Share
U.S. Gulf Coast	141.8	163.2	32.9%	145.5	166.5	33.3%
Asia	234.2	179.3	54.3%	231.6	184.2	53.1%
Central America / Caribbean	0.0	37.3	0.0%	0.0	23.3	0.0%
Others	33.6	7.7	7.8%	29.5	11.8	6.8%
Europe	21.6	21.5	5.0%	27.0	11.8	6.2%
U.S. West Coast	0.0	5.4	0.0%	2.7	2.0	0.6%
South America	0.0	0.0	0.0%	0.0	0.0	0.0%
U.S. East Coast	0.0	0.0	0.0%	0.0	0.0	0.0%
Total	431.2	414.4	100.0%	436.3	399.6	100.0%

Products - mboed	2Q 2023	2Q 2022	% Share	6M 2023	6M 2022	% Share
Central America / Caribbean	26.4	63.8	23.3%	26.0	45.9	23.5%
U.S. Gulf Coast	30.5	13.2	26.9%	37.8	16.5	34.2%
Asia	32.1	11.7	28.4%	24.6	8.9	22.2%
South America	4.8	5.9	4.2%	7.3	6.3	6.6%
U.S. East Coast	0.0	5.6	0.0%	0.0	0.0	0.0%
Europe	8.1	5.6	7.1%	6.6	2.8	6.0%
U.S. West Coast	0.0	0.0	0.0%	0.0	0.0	0.0%
Others	11.4	(2.3)	10.1%	8.5	0.5	7.7%
Total	113.3	103.4	100.0%	110.7	80.9	100.0%

Note: The information is subject to change after the end of the quarter, as some destinations are reclassified according to the final result of exports.

Table 10: Local Purchases and Imports - Ecopetrol Group

Local Purchases - mboed	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Crude Oil	210.7	187.5	12.4%	207.6	182.4	13.8%
Gas	3.7	3.3	12.1%	3.9	2.5	56.0%
Products	3.4	3.1	9.7%	3.3	3.1	6.5%
Diluent	0.0	0.0	-	0.0	0.0	-
Total	217.9	193.9	12.4%	214.8	188.0	14.3%

Imports - mboed	2Q 2023	2Q 2022	Δ (%)	6M 2023	6M 2022	Δ (%)
Crude Oil	73.5	41.4	77.5%	72.2	34.9	106.9%
Products	70.6	102.2	(30.9%)	75.5	117.3	(35.6%)
Diluent	20.8	35.8	(41.9%)	24.5	35.4	(30.8%)
Total	164.9	179.4	(8.1%)	172.2	187.6	(8.2%)

Total	382.8	373.3	2.5%	387.0	375.6	3.0%
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Table 11: Exploratory Wells Detail - Ecopetrol Group

#	Quarter	Name	Initial Well Classification (Lahee)	Block	Name	Operator/Partner	Status	TD Date
1	First	Cupiagua XD 45	A2C	SDLA	Piedemonte	Ecopetrol 100% (Operator)	Under evaluation	Jan 18/2023
2	First	Picabuey-1	A3	LLA-87	Llanos Orientales	Hocol 50% Geopark 50% (Operator)	Dry	Jan 18/2023
3	First	Magnus-1	A3	CPO-09	Llanos Orientales	ECP 55% (Operator) Repsol (45%)	Under evaluation	Jan 21/2023
4	First	Turupe-1 ST	A3	LLA-9	Llanos Orientales	Ecopetrol 100% (Operator)	Dry	Feb 10/2023
5	First	Zorzal-1	A3	LLA-87	Llanos Orientales	Hocol 50% Geopark 50% (Operator)	Under evaluation	Feb 11/2023
6	First	Koala-1	A3	LLA-87	Llanos Orientales	Hocol 50% Geopark 50% (Operator)	Dry	Mar 13/2023
7	First	Leyenda-1	A3	CPO-09	Llanos Orientales	ECP 55% (Operator) Repsol (45%)	Under evaluation	Mar 14/2023
8	First	Cusiana V 31	A3	SDLA	Piedemonte	Ecopetrol 100% (Operator)	Under evaluation	Jan 18/2023
9	Second	Kimera-1	A3	CPO-9	Llanos Orientales	Repsol 45% (Operator) ECP 55%	Under evaluation	Apr 11/2023
10	Second	Pollera N	A3	SSJN-1	Cinturón Plegado de San Jacinto	Lewis 50% (Operator) Hocol 50%	Under evaluation	May 2/2023

Table 12: HSE Performance (Health, Safety and Environment)

HSE Indicators*	2Q 2023	2Q 2022	6M 2023	6M 2022
Frequency of total registrable injuries (No. Recordable cases / Million man hours)	0.29	0.30	0.23	0.26

* The results of the indicators are subject to change after the end of the quarter due to the fact that some of the accidents and incidents are reclassified according to the final result of the investigations.