

2021 Results

BEST EVER IN ECOPETROL'S HISTORY



Financial Results

COP Trillion

• Revenues • EBITDA • Net Income • EBITDA Margin

Record Financial Results for Ecopetrol


BRENT
USD/BL
BASKET PRICE
USD/BL

72
63

64
59

43
34

71
67

HSE



TRIF: 0.44

ZERO FATALITIES


Winner Portfolio 2021 Award
"Better People, Better Country", and
Equipares Seal - Silver Level



Equipares Seal - Silver Level
and winner BOSCARES Award

Operational Results

mboed: Thousand barrels of oil equivalent per day
mbd: Thousand barrels per day

Production

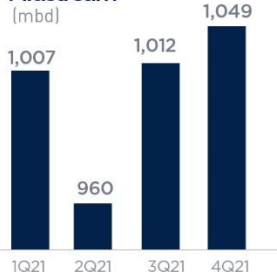
(mboed)



2021 Average: 679

Midstream

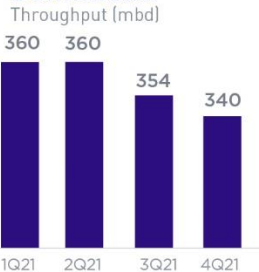
(mbd)



2021 Average: 1,007

Downstream

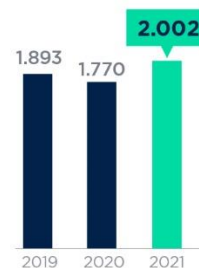
Throughput (mbd)



2021 Average: 354

Reserves

Volume (Mboe)


Mboe: Million barrels
of oil equivalent

8.7
years

Average
Reserve Life

RRR
200%

Highest in last
12 years

Reserve Replacement
Ratio

**CONTRIBUTED
MORE THAN**
COP
3.1
TRILLION

in revenues in 4Q21 and
16% of the Group's EBITDA

ENERGY TRANSMISSION


• First **ENERGY
STORAGE PROJECT**
awarded in Brazil

• First ***HVDC
TRANSMISSION
PROJECT** in Chile

*High Voltage Direct Current

TOLL ROADS

Operational start-up of

100%

of the Barranquilla-Cartagena
4G project

TESG

Technology, Environmental, Social, Governance

INCREASE IN
Dow Jones
Sustainability Index
SCORE

COP 469
BILLION
in Social Investments

110%
DELIVERY
2021 Target "Sembrar nos Une"
~ 4.4 million trees planted

66 MWp
awarded for the
construction of
SOLAR FARMS

isa
7th consecutive year in
Dow Jones
Sustainability Index




At the Ecopetrol Group we seek to attain long-term business competitiveness and sustainability. Accordingly, we have made significant progress during 2021 by consolidating our position as a leading energy and infrastructure group in Latin America, supported by our acquisition of ISA.

The Ecopetrol Group's resilience, its ability to adapt to external impacts, the effort and drive of its more than 18,000 employees, and the coordinated work with diverse actors across the chain allowed us to guarantee the domestic fuel supply, swiftly responding promptly to an increase in demand of more than 25% with respect to pre-pandemic levels. We increased our domestic gas supply, overcoming the supply crisis, weather-related infrastructure issues, and the public order situation that affected our country during the second quarter of the year.

This February we launched our 2040 strategy, named "Energy that Transforms". Our long term goals, mapped in the strategy, include consolidating the Ecopetrol Group as a flexible, agile and dynamic organization, capable of rapidly adapting to constant change and the global challenges of a world striving to accelerate the generation and use of clean energy; while continue to pursue profitable growth and sustainable leadership in the Americas.

I am pleased to share the results of our **Competitive Returns** strategic pillar, which has enabled us to achieve annual consolidated revenues of COP 91.7 trillion, an 83.4% increase as compared to 2020; net income of COP 16.7 trillion, and EBITDA of COP 42.0 trillion (EBITDA margin of 46%), all record high results that allowed us to obtain a return on average capital employed (ROACE) of 13.6%. Fourth-quarter results were also exceptional: our consolidated revenue amounted to COP 31.8 trillion, net income of COP 6.1 trillion, and EBITDA of COP 14.0 trillion with an EBITDA margin of 44%, showcasing better results in 2021 than those years with better average crude prices.

In our **Growth with the Energy Transition** strategic pillar, we progressed on multiple fronts. Our **reserve balance** reached 2,002 million barrels of oil equivalent, an increase of 13% in comparison to 2020. For each barrel produced this year, we added two barrels to our reserves, reaching a reserves replacement ratio of 200%, the highest in the last 12 years. The average reserve life increased to 8.7 years, reflecting the Company's remarkable management, even surpassing levels reached in the past. Gas represented 28% of total reserve balance and reported an average life of 10.4 years.

In **exploration**, we drilled 13 wells in conjunction with our partners, exceeding the annual target of 9 wells set for 2021. Annual production from exploration assets included

65% derived from oil and 35% from gas. Domestically, in the 2021 Colombia Round, Ecopetrol S.A. was awarded three blocks in the Mid-Magdalena Valley basin, one in the Llanos Orientales basin, and - through Hocol - one in the Sinú San Jacinto basin.

In 2021 we reached an average **production** of 679 mboed, evidencing a recovery trend and closing the year with production for the quarter reaching 695 mboed. Within the Group's total production, crude share increased to 79% favored by the successful drilling campaign in the Permian, where we achieved a cumulative number of 132 drilled wells and an operational peak production above 50 mboed, well beyond our expectations.

During 2021 **natural gas and GLP** production represented 21% of the Group's total production, driven by the increase seen in supply in the year, reaching a combined EBITDA margin of 53%.

Regarding **Unconventional Reservoirs in Colombia**, we filed to ANLA the Environmental Impact Assessment for the Integral Investigation Pilot Project Kalé, and moved forward in preparing the respective study for the Platero project, which was recently filed in February of this year.

In the **Midstream** segment, total volumes transported during the year reached 1,007 mbd, leveraged on economic recovery, with an increase of 20% in multipurpose pipelines.

In the **Downstream** segment, the positive trend seen throughout 2021 allowed us to close the year with a consolidated throughput of 354 mbd and a combined annual gross margin of 10.2 USD/BI, and a record in the fourth quarter of 12.5 USD/BI. The outstanding annual results, with record EBITDA for the segment, were supported on our operational stability in the refineries, the recovery of liquid fuel demand and its margins, Esentia's historic record results and the segment's operating cost stability across all business lines.

In the **commercial front**, we highlight the increase from 34 USD/BI in 2020 to 67 USD/BI in 2021 in our crude oil basket realization price, illustrating the success of our strategy to diversify into other export destinations and to strengthen our relationship with clients. Today, the Asian market is our main export destination representing 57% of all exports.

The quarterly results for the **Energy Transmission and Toll roads** segment, with ISA's results included in the Group's fourth quarter consolidated results, amounted to COP 3.1 trillion in revenues, 0.6 trillion in net income and 16% of the EBITDA for the quarter. Some of the highlights of this last quarter for the energy business include the award of the 1,415 km high voltage direct current transmission project with a capacity of 3,000 MW at 600 kV in Chile, a project that will connect the north of the country with the metropolitan area, and the adjudication of

the first large-scale energy storage project in Brazil. In the toll roads business, we highlight the completion of the construction stage and start of operations of 100% of the 4G Cartagena-Barranquilla project.

In our **Generate Value Through T ESG** pillar, the following advances were made:

In the **environmental front**, in terms of relevant decarbonization developments established the net-zero carbon emissions goal for Scopes 1 and 2 by 2050, as well as reducing by 50% our total emissions (Scopes 1, 2 and 3) by that same year. In line with these achievements, we are pleased with the progress made in renewable energy projects, with: i) the entry into operation of the San Fernando solar park with a capacity of 61 MW in October 2021, making us the largest self-generator of renewable energy in the country; and, ii) the assignment of the construction and start-up of two additional solar parks with a capacity of 66 MW, increasing total renewable capacity to 178 MW.

Consistent with our decarbonization strategy, in December we sold our first shipment of 1.0 mmbbls of carbon compensated crude from Castilla Blend® to Asia, offsetting the carbon emitted in dilution, production and transportation by purchasing 32,000 carbon Verra certified carbon credits.

In 2021 we recorded a positive progress towards our goal to achieve water neutrality, with the reuse of 74% of the water that we require in our operations. We constantly seek a balance between the water required to operate and taking actions that reduce the water footprint and counteract its impact through conservation projects.

In an effort to mitigate climate change, contribute to the protection of flora and fauna, and support the sustainable development of the territories in which we operate, the Ecopetrol Group designated nine additional eco-reserves, reaching a total of 15 zones that will contribute towards the protection of our country's biodiversity.

Another important milestone was achieved with the awarding of Carbon Neutral certifications by the Colombian Institute of Technical Standards and Certification (Icontec) to our subsidiaries Cenit, Oleoducto de los Llanos and Oleoducto Bicentenario.

In the **social front**, for 2021, the Ecopetrol Group allocated social investment resources of COP 469 billion to strategic and legal investments. Additionally, investments through the "Works in lieu of Taxes" mechanism reached COP 232 billion allocated through 28

projects completed by year end, including the provision of educational facilities in 18 municipalities in Casanare and Putumayo. Social investment promoted local development to improve quality of life, thus helping to support high levels of trust in the areas in which we operate. These investments seek to boost the dynamics of local economies, promote education and access to public services.

Additionally, in our efforts to encourage economic reactivation and guarantee better living conditions for millions of Colombian families, Ecopetrol initiated a 6-month reduction of 30% in the price of LPG, a fuel used in many homes across remote areas of our country. During 2021, we installed 6.132 new connections of social gas, advancing in our objective of delivering gas to more Colombian families in vulnerable conditions.

On the **corporate governance front**, during the fourth quarter, Ecopetrol joined the "30% Club" (Colombia chapter), which promotes an increase in the participation of females on boards of directors and management positions in the business sector. The percentage of female participation on the boards of directors of the Ecopetrol Group increased from 18% in 2020 to 22% in 2021. Additionally, the Guidelines for the Boards of Directors of the Ecopetrol Group were updated to take account of the incorporation of new business lines, and to established the succession guidelines for Ecopetrol's board members and its CEO. For its part, ISA and Ecopetrol were awarded the Equipares Labor Equity Seal for its commitment to implementing measures that seek gender equality.

Regarding the **Cutting-edge Knowledge pillar**, during 2021 we made significant progress in the Digital Transformation front, specifically in terms of digital reinvention, through a strategic portfolio that captures value and infuses innovation into each one of our processes, exceeding the capture of planned benefits, with compliance close to 137% equivalent to USD 93 million.

This year's results allow us to begin 2022 in a solid financial position with a favorable pricing environment, a scenario that sets us on positive position to achieve the targets of the 22-24 Plan and provides better options to execute certain milestones included in the framework of our 2040 Strategy. We will continue to challenge ourselves, evolve and move further towards an integrated hydrocarbon chain, as well as towards decarbonization, electrification and diversification.

Felipe Bayón
CEO Ecopetrol S.A.

Bogotá, March 1, 2022. Ecopetrol S.A. (BVC: ECOPETROL; NYSE: EC) announced today the Ecopetrol Group's financial results for the fourth quarter of and year end results for 2021, prepared in accordance with the International Financial Reporting Standards applicable in Colombia.

In 2021, the Ecopetrol Group obtained outstanding financial results, as reflected in a net income of COP 16.7 trillion, 10 times higher than that of 2020, and an EBITDA of COP 42 trillion, both record indicators in its history. This performance was supported by: i) a favorable Brent-COP environment and notable commercial management that allowed us to materialize better crude, product and petrochemical price differentials; ii) higher product and gas sales volumes, associated with higher domestic demand as a result of economic reactivation; iii) a solid operating performance in all its business segments despite the public and social order situation in the country in 2021; iv) the contribution of Permian to production; and, v) the acquisition of ISA.

Table 1: Financial Summary Income Statement - Ecopetrol Group

Billion (COP)	4Q 2021	4Q 2020	Δ (\$)	Δ (%)	12M 2021	12M 2020	Δ (\$)	Δ (%)
Total sales	31,761	14,190	17,571	123.8%	91,744	50,027	41,717	83.4%
Depreciation and amortization	2,404	2,300	104	4.5%	9,599	8,985	614	6.8%
Variable cost	12,685	5,536	7,149	129.1%	34,678	19,840	14,838	74.8%
Fixed cost	4,043	2,471	1,572	63.6%	11,305	8,728	2,577	29.5%
Cost of sales	19,132	10,307	8,825	85.6%	55,582	37,553	18,029	48.0%
Gross income	12,629	3,883	8,746	225.2%	36,162	12,474	23,688	189.9%
Operating and exploratory expenses	2,206	2,459	(253)	(10.3%)	6,568	4,841	1,727	35.7%
Operating income	10,423	1,424	8,999	632.0%	29,594	7,633	21,961	287.7%
Financial income (loss), net	(1,518)	(260)	(1,258)	483.8%	(3,698)	(2,481)	(1,217)	49.1%
Share of profit of companies	201	(4)	205	(5,125.0%)	426	88	338	384.1%
Income before income tax	9,106	1,160	7,946	685.0%	26,322	5,240	21,082	402.3%
Income tax	(2,099)	(659)	(1,440)	218.5%	(7,598)	(1,868)	(5,730)	306.7%
Net income consolidated	7,007	501	6,506	1,298.6%	18,724	3,372	15,352	455.3%
Non-controlling interest	(930)	(241)	(689)	285.9%	(2,031)	(1,154)	(877)	76.0%
Net income attributable to owners of Ecopetrol before impairment	6,077	260	5,817	2,237.3%	16,693	2,218	14,475	652.6%
(Expense) recovery for impairment long-term assets	(35)	605	(640)	(105.8%)	(33)	(621)	588	(94.7%)
Deferred tax of impairment	35	(190)	225	(118.4%)	35	91	(56)	(61.5%)
Net income attributable to owners of Ecopetrol	6,077	675	5,402	800.3%	16,695	1,688	15,007	889.0%
EBITDA	13,981	4,334	9,647	222.6%	41,967	16,840	25,127	149.2%
EBITDA Margin	44.0%	30.5%	-	13.5%	45.7%	33.7%	-	12.0%

The financial information included in this report has been audited and is expressed in billions 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 within the meaning of Section 27A of the U.S. Securities Act of 1933 and Section 21E of the U.S. Securities Exchange Act of 1934. All forward-looking statements, whether made in this release or in future filings or press releases or orally, address matters that involve risks and uncertainties, including in respect of Ecopetrol's prospects for growth and its ongoing access to capital to fund Ecopetrol's business plan, among others. Consequently, changes in the following factors, among others, could cause actual results to differ materially from those included in the forward-looking statements: market prices of oil & gas, our exploration and production activities, market conditions, applicable regulations, the exchange rate, Ecopetrol's competitiveness, our ability to successfully integrate our recently acquired subsidiary, ISA, and the performance of Colombia's economy and industry, to mention a few. We do not intend, and do not assume any obligation to update these forward-looking statements.

I. Financial and Operating Results

Sales Revenue

The 83.4%, or COP +41.7 trillion, increase in sales revenues for the year ended 2021 as compared to 2020, totaling COP +91.7 trillion, primarily as the combined result of:

- An increase of 28.7 USD/BI, from 39.6 USD/BI to 68.3 USD/BI (COP +33.4 trillion), in the weighted average sale price of crude oil, gas, and related refined products, as a result of: i) the strengthening of the international reference prices; ii) better negotiated oil differential due to our commercial efforts; and, iii) higher product indicators.
- A COP +4.2 trillion increase in service revenues, primarily due to the consolidation of ISA's financial results as of September.
- An increase in the average COP/USD exchange rate of +50 COP/USD which positively impacted revenues (COP +2.8 trillion).
- An increase in sales volume (COP +1.3 trillion, +10.9 mboed), primarily due to the recovery in domestic refined products demand which exceeded pre-pandemic levels, and higher gas production by Hocol and in the Permian basin. This increase was partially offset by a lower volume of crude exports as a result of lower production levels.

The 123.8%, or COP +17.6 trillion, increase in revenues in 4Q21 as compared to 4Q20, totaling COP 31.8 trillion, primarily as a result of:

- An increase of +32.3 USD/BI in the weighted average sales price of crude oil, gas and products, 43.8 USD/BI in 4Q20 to 76.1 USD/BI in 4Q21 (COP +11.0 trillion), as a result of the strengthening of the reference price, our commercial efforts, as well as improved product indicators.
- A COP +3.2 billion increase in service revenues, associated with the consolidation of ISA's results and the approval of the Frontera Agreement by the Administrative Court of Cundinamarca.
- An increase in the COP/USD average exchange rate which positively impacted revenues (COP +2.0 billion), due to a higher average exchange rate of +218 COP/USD.
- An increase in sales volume (COP +1.4 billion, or +97.5 mboed), mainly due to: i) the completion of shipments negotiated under the DAP (Delivery at Place) modality, which had remained in transit during the previous quarter; ii) higher sales of refined products and gas mainly due to increased domestic demand; and iii) greater availability of crude oil for export due to operational normalization of TLU2.

Table 2: Sales Volume –Ecopetrol Group

Local Sales Volume - mboed	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Medium Distillates	163.6	129.8	26.0%	145.5	119.1	22.2%
Gasoline	154.8	126.5	22.4%	135.1	100.8	34.0%
Natural Gas	97.2	93.8	3.6%	92.0	85.7	7.4%
Industrials and Petrochemicals	21.6	23.8	(9.2%)	21.9	22.0	(0.5%)
LPG and Propane	20.8	19.2	8.3%	19.4	18.2	6.6%
Crude Oil	2.3	4.7	(51.1%)	2.4	6.0	(60.0%)
Fuel Oil	0.1	0.7	(85.7%)	0.3	1.2	(75.0%)
Total Local Volumes	460.4	398.5	15.5%	416.6	353.0	18.0%
Export Sales Volume - mboed	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Crude Oil	460.3	401.6	14.6%	375.8	418.5	(10.2%)
Products	89.4	114.6	(22.0%)	98.0	109.7	(10.7%)
Natural Gas*	3.9	1.8	116.7%	3.2	1.5	113.3%
Total Export Volumes	553.6	518.0	6.9%	477.0	529.7	(9.9%)
Total Sales Volumes	1,014.0	916.5	10.6%	893.6	882.7	1.2%

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

Total volume sold during 2021 amounted to 893.6 mboed, a 1.2% or 10.9 mboed increase as compared to the volume sold in 2020, as a result of higher local sales. This increase; was partially compensated by a 9.9% decrease in export volumes.

Colombian sales, which accounted for 46.6% of the total, increased 18.0% (63.6 mboed) in 2021 as compared to 2020, mainly due to:

- Increases in the sales of gasoline (+34.3 mbod) and middle distillates (diesel and jet fuel) (+26.4 mbod) as a result of the strengthening of domestic fuel demand, which was mainly driven by the economic recovery once the COVID-19 pandemic peaks were overcome in the country.
- An increase in gas sales (+6.3 mboed) supported by the recovery in the demand covered by Ecopetrol, which had been affected by COVID-19, (+1.4 mboed), through an increase in production from Piedemonte and Hocol (+4.9 mboed) primarily due to : i) increases in volumes from the acquisition of Chevron's participation in the Guajira Association in May 2020 (+3.1 mboed); ii) lower intercompany sales within the Ecopetrol Group leading to higher volumes available for third parties sales (+1.0 mboed); and, iii) higher production (+0.8 mboed).
- Greater product sales of petrochemical and industrial products driven mainly by: i) greater asphalt volumes; ii) better negotiated prices in polyethylene, asphalt, and diluents; iii) more trading operations; and, iv) better performance of international indicators, in particular, coke prices which experienced an important growth in 2021 due to the reduced offer within international markets.

International sales, which accounted for 53.4% of the total, decreased 9.9% (52.7 mboed) in 2021 as compared to 2020, mainly due to the combined result of:

- A decrease in crude oil exports (-42.7 mbod), primarily due to decreased availability as a result of higher throughput and lower production levels.
- A decrease in product exports (-11.7 mbod), mainly diesel, which was allocated to supply the domestic market as a result of the recovery in demand.
- An increase in gas sales mainly from Permian (+1.5 mboed) from increased production.

Table 3: Average Realization Prices - Ecopetrol Group

USD/BI	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Brent	79.7	45.3	75.9%	70.9	43.2	64.1%
Natural Gas Basket	26.0	24.8	4.8%	24.9	24.3	2.5%
Crude Oil Basket	73.8	40.7	81.3%	66.8	34.4	94.2%
Products Basket	89.7	51.1	75.5%	79.6	49.2	61.8%

Crudes: for the year ended 2021 crude oil basket prices reached 66.8 USD/BI, an increase of 32.4 USD/BI, or 94.2%, as compared to 2020 (34.4 USD/BI). This increase is primarily a result of the increase in the Brent price and the result of the market diversification commercial strategy, supported by the stability of the quality of our blends and reliability in supply. Sales volumes continue to be negotiated under the DAP (Delivered at Place) modality to various destinations such as China, South Korea, India, Brunei, Sweden and the U.S. Gulf Coast.

During 4Q21, the crude oil basket increased 33.1 USD/BI, or 81.3%, increasing from 40.7 USD/BI to 73.8 USD/BI, as compared to 4Q20, recording the best quarter since 2014. this result was in line with our expectations for the year.

Refined products: for the year ended 2021, the refined products basket increased 30.4 USD/BI, or 61.8%, as compared to 2020, reaching 79.6USD/BI in 2021 going from 49.2 USD/BI in 2020, primarily due to the recovery of international prices as a result of the reactivation of demand given the decrease in mobility restrictions, and to the commercial efforts to expand client portfolio and an increased usage of financial tactical hedges.

The 38.6 USD/BI, or 75.5% increase in refined products basket for 4Q21, to 89.7 USD/BI from 51.1 USD/BI in 4Q20, also due to the strengthening of international price indicators as discussed above.

Natural Gas: The 0.6 USD/BI, or 2.5% increase in the gas sales basket for the year ended 2021 as compared to 2020, was mainly due to annual price increases defined in the contracts and higher revenues from take-or-pay contracts and availability contracts.

During 4Q21 the 4.8%, or 1.2 USD/BI increase in the gas sales price to 26.0 USD/BI from 24.8 USD/BI in 4Q20, was mainly due to increased revenues from an increase in take-or-pay contracts.

Hedging Program: During 2021, Ecopetrol executed financial tactical price hedges for a total of 37 million barrels, in crude oil exports and product operations. Tactical hedging is part of the Asset-Backed Trading (ABT) commercial strategy that seeks to maximize the value of products through the optimal use of our assets. During 4Q21, nine tactical price hedges were executed by Ecopetrol and one by the Cartagena Refinery, for a total of 12.26 million barrels.

Additionally, during 2021, eight strategic hedging operations were executed for 1.6 million barrels of crude oil in Ecopetrol Permian in order to secure nearly 50% of the incremental production between May and December of 2021.

Cost of Sales

Cost of sales increased 48.0%, or COP +18 trillion, for the year ended 2021 as compared to 2020, and increased 85.6%, or COP +8.8 trillion, in 4Q21 as compared to 4Q20. This increase in the cost of sales is mainly the result of:

Variable Costs:

The 74.8%, or COP +14.8 trillion increase in variable costs for the year ended 2021 as compared to 2020, as a combined result of:

- Increased purchases of crude oil, gas, and refined products (COP +18.1 trillion), primarily due to: i) an increase in the weighted average price of national purchases and imports (+33.6 USD/BI; COP +14.5 trillion) in line with international indicators; ii) purchase volume increase in +41.6 mboed (COP+ 2.9 trillion), because of the the economic reactivation which led to an increase in demand for liquid fuels and new crude oil commercialization contracts, in line with the commercial strategy; and, iii) increase in the average COP/USD exchange rate for purchases, which had a positive effect in the cost of purchase (COP +0.7 trillion).
- Inventory fluctuation (COP -3.7 trillion), primarily due to: i) valuation of the price of crude oil and products purchased given the recovery of international reference prices; ii) higher inventory of crude oil in transit, associated with higher DAP sales scheduled for 2022 versus FOB (Free on Board) sales during the previous year; and, iii) higher inventory levels due to crude oil evacuation restrictions and maintenance activities in some refining units.
- Other minor variations totaling COP +0.4 trillion.

Variable costs for 4Q21 increased 129.1%, or COP +7.1 trillion, as compared to 4Q21 as a combined result of:

- Increase in the purchase of crude oil, gas and products (COP +6.4 trillion), due to: i) an increase in the weighted average price of domestic purchases and imports (+38.7 USD/BI; COP +4.8 trillion); ii) volumes increases in our purchases of +63.2 mboed (COP +1.0 trillion), mainly due to imports of refined products in response to scheduled maintenance at the Barrancabermeja Refinery and increased domestic demand for refined products; and, iii) an increase in the average exchange rate on purchases (COP +0.6 billion).

- Inventory fluctuation (COP +0.7 trillion) mainly due to: i) larger deliveries of crude DAP shipments; ii) greater refined products consumption to cover domestic demand; and, iii) greater liquidation of gas royalties associated with increased production.

Fixed Costs:

The 29.5%, or COP +2.6 trillion increase in fixed costs in 2021 as compared to 2020, was mainly due to: i) the impact of the consolidation of ISA's results (COP +1.5 trillion); ii) increases in contracted services, maintenance activities, operation supplies and other operational activity costs (COP +0.7 trillion), as a result of increased execution of activities related to the economic reactivation, greater participation in fields such as Nare and Piedemonte and higher tariffs and inflation effect in contracts; and, iii) increased taxes (COP +0.4 trillion), mainly due to an increase in not deductible VAT associated with higher purchase levels.

Fixed costs presented an increase of +63.6%, or COP +1.6 trillion, in 4Q21 as compared to 4Q20, due to the same factors mentioned above for the cumulative result, and increased execution of activities of the Ecopetrol Group at the end of the year.

Depreciation and Amortization:

The 6.8%, or COP +0.6 trillion increase for the year ended 2021 as compared to 2020, was mainly due to the effect of the acquisition and consolidation of ISA's results and to the increase in Permian's production. Similarly, an increase of 4.5%, or COP +0.1 trillion in 4Q21 as compared to 4Q20 was registered, mainly due to: i) the effect of the consolidation of ISA's results; ii) increases in capital investment; and, iii) increase in Permian's production. This increase was partially offset by an increase in incorporation of reserves, which translates into a lower depreciation rate for 4Q21.

Operating Expenses, net of other income (before impairment of long-term assets)

An increase of +35.7%, or COP +1.7 trillion, for the year ended 2021 as compared to 2020, as a combined result of:

- The baseline effect of the non recurring impact in connection with the extraordinary income recognized in 2020 as a result of Hocol's acquisition of a 43% stake in the Guajira partnership contract from Chevron, with a positive effect on the income for that period given the market valuation of both the acquired portion and the pre-existing 57% in Ecopetrol S.A. (COP +1.4 trillion), which was not present in 2021.
- A COP +0.5 trillion increase in provisions, mainly associated with environmental aspects and the public works contribution process.
- A COP +0.3 trillion increase in exploration expenses due to: i) increased exploratory activity mainly associated with seismic in Brazil; ii) updating of dry well abandonment costs; and, iii) recognition of the exploratory activity of unsuccessful wells.
- ISA's consolidated operating expenses, which amounted to COP +0.3 trillion since the beginning of the consolidation, as well as the costs associated with the acquisition process.
- Increase in social investment projects, especially those carried out for the *Misión Internacional de Sabios*, aimed at the advancement of science, technology and innovation, which was convened by the National Government and communities, among others.
- The above increases in operating expenses were partially offset by non recurrent revenue as a result of the approval of the Frontera Agreement by the Administrative Court of Cundinamarca (COP -0.7 trillion).

For 4Q21, operating expenses, net of other income (before impairment of long term assets) decreased 10.3%, or COP -0.3 trillion, as compared to 4Q20, mainly due to the net effect of the approval of the Frontera Agreement by the Administrative Court of Cundinamarca (COP -0.7 trillion), and decreased labor expenses associated with the recognition of the voluntary retirement plan of 83 people in 4Q21 as compared to 182 people in 4Q20 (COP -0.2 trillion). The above was partially offset by: i) the COP +0.2 trillion increase in connection with the consolidation of ISA's provisions; ii) a COP +0.1 trillion in environmental provisions update; iii) COP +0.1 trillion increase in

commissions and fees expenses given the increase in activity and the signing of specialized consultants in Ecopetrol's processes; iv) a COP +0.1 trillion increase in costs associated cooperation and social investment agreements; and, v) other minor variations totaling COP +0.1 trillion.

Financial Result (Non-Operating)

The 49.1%, or COP +1.2 trillion increase for year ended 2021 as compared to 2020, primarily explained by the net effect of:

- A COP +0.8 trillion increase in financial expenses from the incorporation of ISA's net financial result, including interest, foreign exchange difference, financial revenues and others.
- Lower financial revenues from investment portfolio valuation and portfolio returns (COP +0.3 trillion), in connection with the decrease in the return of market rates and a better average cash balance.
- COP +0.1 trillion increase in the financial cost of debt, due to the new debt raised for the acquisition of ISA.

With respect to 4Q21, non-operating financial results increased by COP +1.3 trillion as compared to 4Q20, due to the net effect of the: i) higher financial expense due the impact of the consolidation of ISA's results (COP +0.6 trillion); ii) foreign exchange rate loses (COP +0.4 trillion), as a result of the devaluation of the peso against the dollar in 4Q21 as compared to 4Q20 on the net liability position in dollars in the Ecopetrol Group; and, iii) higher financial costs and other costs, mainly due to higher debt level (COP +0.3 trillion).

The **Effective Tax Rate** for 2021 was 28.8% as compared to 38.5% in 2020, due to better results from subsidiaries subject to fiscal benefits, mainly the Cartagena Refinery which is taxed at a nominal rate of 15%, and abroad companies such as Ecopetrol America and Permian, for which a tax rate of 21% applies.

Impairment of Long-Term Assets

As a result of the annual exercise of comparing asset book values versus market values under IFRS standards, 2021 reported an impairment expense of long-term assets of COP +33 billion before taxes, as follows:

- **Downstream:** registered an impairment expense of COP -305 billion before taxes, of which: i) COP -340 billion corresponds to the Modernization Plan of the Barrancabermeja Refinery, considering the finalization of the technical analysis of the project, and ii) COP +35 billion corresponds to the Cartagena Refinery, mainly due to the operating and financial improvements that permit capturing greater refining margins in the short and mid-term.
- **Midstream:** recorded an impairment expense of COP -166 billion before taxes, primarily due to a lower volume outlook for the Southern Cash Generating Unit, which is comprised of the Tumaco Port and the TransAndino Pipeline (OTA).
- **Upstream:** recorded an impairment recovery of COP +438 billion before taxes, mainly due to favorable outlook of international prices.

Cash Flow and Debt

Table 4: Cash Position – Ecopetrol Group

Billion (COP)	4Q 2021	4Q 2020	12M 2021	12M 2020
Initial cash and cash equivalents	10,087	7,829	5,082	7,076
(+) Cash flow from operations	11,003	5,336	22,536	9,187
(-) CAPEX	(4,543)	(3,208)	(13,295)	(11,116)
(+/-) Investment portfolio movement	163	877	1,318	2,108
(-) Acquisition of subsidiaries, net of cash acquired	0	0	(9,323)	0
(+) Other investment activities	566	127	782	479
(+/-) Acquisition, borrowings and interest payments of debt	(1,711)	(1,920)	9,729	6,105
(-) Dividend payments	(1,347)	(3,487)	(2,771)	(8,734)
(+/-) Exchange difference (cash impact)	332	(472)	492	(23)
Final cash and cash equivalents	14,550	5,082	14,550	5,082
Investment portfolio	2,917	2,972	2,917	2,972
Total cash	17,467	8,054	17,467	8,054

Cash Flow:

For 4Q21 the Ecopetrol Group's cash position was COP 17.5 trillion comprised of 52% COP and 48% USD. ISA and its subsidiaries contributed COP 5.7 trillion, of which COP 1.7 trillion is available to the controlling shareholder.

For the year ended 2021, the Group's main cash movements were: i) cash flows from operating activities (COP 22.5 trillion); ii) cash from debt financing (COP 14.2 trillion), raised for the acquisition of the controlling stake in ISA, iii) debt service for COP 3.3 trillion; and iv) dividend payments for COP 2.8 trillion to both Ecopetrol S.A. shareholders and non-controlling shareholders of its subsidiaries. The operating cash flow supported CAPEX of COP 13.3 trillion in 2021.

During 2021, working capital increased, mainly due to: i) increase of the account receivable from the Fuel Price Stabilization Fund (FEPC for its Spanish acronym), which as of December 31, 2021 amounted to COP 7.8 trillion, associated with higher international market prices for gasoline and diesel compared to regulated prices in Colombia; and, ii) increased inventories of in-transit vessels under the DAP modality, increased level of in-process products, and higher valuation derived from higher market prices. The above was partially offset by an increase in accounts payable to suppliers, generated by an increase in operational activities during the period and the payment received from the FEPC amounting to COP 3.9 trillion in December for balances due for the second half of 2020 and the first half of 2021.

Operating cash flow for 4Q21 represented 49% of the annual cash flow generated during the year, as a result of the outstanding performance of the quarter, due to better reference prices, increased sales volumes, the COP 1.4 trillion contribution from ISA's operating cash flow and the FEPC payment received mentioned above.

Debt:

For year ended 2021, we had COP 95.1 trillion of debt on the balance sheet, equivalent to USD 23.9 billion. As a result of the strengthening of the Ecopetrol Group's EBITDA, the Gross Debt/EBITDA ratio was 2.3x, decreasing by 0.5 times, when compared to 2.8x for 2020.

During 4Q21 Ecopetrol carried out its first liability management transaction for USD 2 billion. The use of proceeds from the bond issuance, was a partial refinancing of the loan disbursed for the ISA acquisition, thus optimizing the maturity profile of the Ecopetrol Group's debt.

Additionally, in 4Q21, a USD 330 million issuance of inaugural 144A and Reg S bonds was executed by ISA, for a total term of 12 years, placing their first transaction in the international capital markets, diversifying its sources of financing, and taking advantage of its attractive liquidity and diversification business position.

Equity

Equity balance for the Ecopetrol Group as of December 31, 2021 was COP 93.8 trillion, a 68% or COP 38 trillion, increase as compared to 2020. The increase in equity is mainly due to: i) the increase in the non-controlling interest following the consolidation of ISA (COP +16.3 trillion); ii) COP 16.7 trillion increase in the annual net income; and, iii) a COP 2.0 trillion increase in the non-controlling interest on the Group's results, among others.

One of the most relevant milestones of the year is the authorization by the Financial Superintendence of Colombia of Ecopetrol's Shares Issuance and Placement Program (PEC for its Spanish acronym), which allows Ecopetrol to issue shares in one or several placements, simultaneously in the domestic and international markets. Ecopetrol has a renewable five-year term to launch the first simultaneous offering under this Program and pursuant to the guidelines outlined in Law 1118 of 2006, the Nation must retain a minimum capital stake of 80% in Ecopetrol. This authorization does not generate any commitment or obligation to launch an equity offering and any eventual issuance of one or more equity offering(s) under the Program will be subject, among other considerations, to the existence of favorable market conditions.

Financial Impact of the Consolidation of ISA

On August 20, 2021, Ecopetrol acquired 569,472,561 shares of ISA, equivalent to 51.4% of its outstanding shares, for which Ecopetrol paid the agreed price of COP 14.2 trillion or COP 25,000 per share to the Ministry of Finance and Public Credit. The payment was made in USD, for an equivalent amount of USD 3,672 million, financed through foreign debt and the use of cash on hand.

Once the transaction closed, ISA and its subsidiaries began to be consolidated into the Ecopetrol Group's financial statements as a new reporting segment. The effect on the Income Statement and Statement of Financial Position is presented below:

Income Statement

The effect of the consolidation of ISA includes four months of operation (starting September 2021), following the acquisition. The main effects are the following¹:

- Contribution to EBITDA of COP +2.7 trillion (representing 6.5% of Ecopetrol Group's consolidated results). This corresponds to the consolidation of EBITDA generated by ISA since its acquisition, calculated using Ecopetrol's ² methodology for its three business lines: energy transmission, toll roads, and telecommunications.
- Contribution to the net income of COP +0.3 trillion (representing 1.6% of Ecopetrol Group's total consolidated results). This corresponds to the EBITDA already mentioned, net of non-operating results: i) depreciation; ii) financial results; iii) taxes; and, iv) the non-controlling interest in the results of affiliates in which ISA does not have a 100% interest, and Ecopetrol's non-controlling interest in ISA (48.6%).
- In addition to the results directly generated from ISA's operation, this segment recognized a gain from the exchange rate difference on the debt used to finance the acquisition of ISA (COP +0.4 trillion), which is partially offset by: i) the financial interests associated with the ISA acquisition debt (COP -0.1 trillion); ii) the consultancy fees and costs incurred by Ecopetrol for the acquisition (COP -0.1 trillion); and, iii) the income tax related to the items previously mentioned.

Statement of Financial Position

Additionally, for the year ended 2021, the consolidation of ISA and its subsidiaries had the following effects on our consolidated statement of financial position:

¹ For reconciliation of figures see Table 5 - Results by Business Segment – Ecopetrol Group, in the supplementary Tables to the Report, available on Ecopetrol's website.

² Ecopetrol's EBITDA calculation methodology includes, unlike ISA's methodology, the equity method in associated companies and joint ventures, as well as taxes, other than income tax.

- **Assets:** Each of the components of ISA's assets was consolidated, equivalent to COP 61.7 trillion³ (representing 25.2% of Grupo Ecopetrol's total consolidated results), as well as the difference between fair and book value of ISA's assets for COP 13.5 trillion.
- **Liabilities:** Each of the components of ISA's liabilities was consolidated, equivalent to COP 39.6 trillion⁴ (representing 26.3% of Grupo Ecopetrol's total consolidated results), as well as the difference between the fair value and the book value of ISA's liabilities for COP 2.7 trillion.
- **Equity:** ISA's non-controlling interest in subsidiaries and Ecopetrol's non-controlling interest in ISA were consolidated, both valued at their fair value of COP 18.7 trillion in accordance with IFRS standards. Similarly, conversion adjustments and other concepts of Other Comprehensive Income are also incorporated.
- Additionally, the USD 3,672 million loan taken by Ecopetrol to finance the ISA acquisition is reflected in this segment.
- During 4Q21, a dividend payment was received from ISA corresponding to 2020 annual earnings for COP 0.3 trillion, which represented a lower value than the purchase price paid.

Efficiencies

For 2021, the Ecopetrol Group realized efficiency savings of around COP 3 trillion, which allowed it to mitigate the impact of inflation on costs, mainly due to the following actions:

- OPEX and revenue efficiencies through actions focused on strengthening EBITDA for COP 2.14 trillion, which mainly include: i) strategies identified and implemented by the production business, focusing on optimizing and improving lifting costs; ii) actions related to revenue and margin strategies, mainly in the commercial area and refineries, and iii) optimizing of energy generation and gas self-consumption in the downstream segment, among others.
- CAPEX efficiencies for COP 0.83 trillion, as a result of the continuous improvement in drilling and completion of wells, including: i) a 29 USD/ft decrease in the cost per drilled foot to 212 USD/ft in 2021 as compared to 241 USD/ft in 2020; ii) a 62 KUSD/well⁵ decrease in the completion cost to 405 KUSD/well in 2021 as compared to 467 KUSD/well in 2020; and, iii) strengthening of the efficiency strategy in the optimization of facility construction and major maintenance projects, workovers and equipment replacement strategies.

³ Some of the most representative consolidated items include: i) assets from concessions for COP 23.4 trillion; ii) property, plant and equipment for COP 23.2 trillion; and iii) cash for COP 5.7 trillion.

⁴ Some of the most representative items are: i) ISA's debt for COP 28.0 trillion; and ii) current and deferred taxes for COP 7.8 trillion.

⁵ KUSD/Well. Thousands of Dollars per Completed Well.

Investments

Table 5: Investments by Segment – Ecopetrol Group and ISA

Million (USD)	Ecopetrol S.A.	Affiliates and Subsidiaries	Total 12M 2021	% Share
Production	1,474	735	2,209	68.1%
Downstream	228	198	426	13.1%
Exploration	86	122	208	6.4%
Midstream*	0	306	306	9.4%
Corporate**	94	0	94	2.9%
Total excluding ISA	1,882	1,361	3,243	100.0%
Energy Transmission	0	955	955	86.2%
Toll Roads	0	126	126	11.4%
Telecommunications	0	27	27	2.4%
Total ISA	0	1,108	1,108	100.0%
Total	1,882	2,469	4,351	-

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

** Includes investment in energy transition projects.

In 2021, the Ecopetrol Group made capital investments totaling USD 8,024 million, of which organic investments amounted to USD 4,351 million and inorganic investments (the ISA acquisition) amounted to COP 14.2 trillion (USD 3,673 million). This is the Group's highest level of investment in the last six years. Of the total organic investments in the oil and gas business, 78% were made in Colombia, and the remaining 22% in the United States, Brazil, and Mexico.

Execution of organic investments for 2021 was lower than initially expected mainly due to: i) efficiencies in the maturation and execution phases of projects, mainly development and production projects; ii) restrictions related to the public order situation and the impact of COVID-19 on global supply chains, which affected the normal development of the project supply process; iii) longer delays in administrative procedures, which mostly impacted activities in the Piedemonte; and, iv) blockades in the Rubiales, Caño Sur, La Cira, and Llanito fields.

Investments in growth of the gas chain represented 7% of the annual investments and were mainly affected by the delays of Piedemonte activities as a result of administrative procedures.

ISA's investments during 2021 amounted to USD 1,108 million, and are primarily concentrated in the energy transmission business (86% or USD 955 million), while toll roads and telecommunications accounted for 12% (USD 126 million) and 2% (USD 27 million) respectively. Brazil and Colombia accounted for 49% and 18% of total investments respectively, and the remaining 35% corresponded to investments mainly in Chile and Peru.

During 4Q21, Ecopetrol investments were mainly allocated to the production business and operational continuity activities in the downstream segment.

Upstream: The Upstream segment accounted for 75% of the Ecopetrol Group's organic investments in 2021, which enabled a total of 395 wells drilled and completed, and 443 workovers, mainly concentrated in Rubiales, Castilla, Mid-Magdalena Valley and the Permian basin. In addition, 13 exploratory wells were drilled in 2021, 11 of them in Colombia and 2 by Ecopetrol America and Mexico subsidiaries.

In terms of unconventional reservoirs (YNC for its Spanish acronym), in 2021 close to USD 600 million in investments were made, focused on increasing development activities in the Permian basin in Texas, United States, and in the maturation of initiatives associated with Comprehensive Pilot Research Projects for Unconventional Reservoirs (PPH for its Spanish acronym) in the Mid-Magdalena Valley basin.

Midstream: For 2021, investments by Cenit and its subsidiaries represented 9% of the Ecopetrol Group's investments, and were mainly focused on integrity and reliability of oil and multipurpose pipeline infrastructure.

Downstream: Investments in 2021 focused on operational continuity (81%), intending to maintain efficiency, reliability and integrity of the operation in the refineries, of which the completion of the tests of the biological reactor of the Wastewater Treatment Plant project in Barrancabermeja is worth noting (stage 1 ends in April 2022). This project allowed the company to ensure compliance with discharge regulations. Investments focusing on the growth of the segment were mainly concentrated in the progress of the interconnection project of the original crude unit of the Cartagena refinery with the new refinery (IPCC for its Spanish acronym).

TESG: USD 177 million were allocated to projects in decarbonization and efficient water management of the operations. Additionally, progress was made in the execution of investments in technology and innovation, with a focus on digital transformation, enhanced recovery and energy transition, with investments for USD 75 million.

ISA: During 4Q21, ISA executed investments in energy transmission totalling USD 126.4 million, to advance in the construction of 29 energy transmission projects and 233 grid reinforcements and improvements to increase reliability of the existing network. Of these investments, 30.7% were made in Colombia, for the construction of several ongoing transmission projects awarded by the UPME to ISA in previous years; 30.3% in Peru, mainly in the Coya Yana project; and the remaining 39.0% in Chile and Brazil. These projects, plus the reinforcement and improvement works for CTEEP, will generate future revenues of close to USD 420 million once they all enter into operation. In addition, ISA executed investments in toll roads amounting to USD 31.7 million, primarily allocated to Regulatory Safety Works in the four concessions in operation in Chile, Section III and road works in Ruta del Maipo, in addition to the Construction of Rutas del Loa. The construction of Section 6 of the Cartagena-Barranquilla coastline concession in Colombia was also completed during 4Q21.

II. Results by Business Segment

1. UPSTREAM

Reserves

By year end 2021, Ecopetrol's reported net proved reserves of 2,002 mboe, an increase of 13% versus 2020 (1,770 mboe⁶). 89% of such proved reserves correspond to fields in Colombia and the remaining 11% to Ecopetrol Permian and Ecopetrol America operations in the United States.

The Reserve-Replacement Ratio (RRR) was 200%, which means that for every barrel produced during the year, two barrels were added to the reserves.

The average life of reserves increased to 8.7 years, surpassing the level of 2014 when the average Brent price was USD 102 per barrel (compared to USD 69.2 per barrel in 2021). Of the total reserves' balance, 72% are liquid fuels, with an average life of 8.2 years, while the remaining 28% corresponds to gas, with an average life of 10.4 years.

The incorporation of proven reserves was 462 mboe, of which 282 mboe were primarily as a result of: i) outstanding management in the development fields in Colombia; ii) Ecopetrol Permian operations in the United States; iii) the maturing of new projects; and, iv) the implementation of enhanced recovery expansion projects, primarily in the Chichimene, Castilla and Akacias fields. The remaining volumes correspond to the favorable effect of the recovery of Brent price during 2021.

As a result of the sale of Savia - Peru effective as of January 2021, a disincorporation of reserves in the amount of 3.5 mboe was registered ([see](#) 2021 reserves report).

⁶ Millions barrels of oil equivalent

Table 6: Reserves – Ecopetrol Group

mboe	2021	2020
Initial Proven Reserves	1,770	1,893
Revisions	315	(72)
Enhanced Recovery	139	113
Purchases	0	30
Sales	0	(1)
Extensions and Recoveries	12	43
Production	(231)	(236)
Proven Reserves Year End	2,002	1,770

Exploration

In 2021, Ecopetrol and its partners drilled 13 exploratory wells, 4 above the initial plan of 9 wells, of which 11 were in Colombia, 1 well in the United States and 1 in Mexico. Additionally, in the activity operated at sole risk by partners, 4 wells were drilled in Colombia.

As for the wells drilled in 2021:

- Three were successful: Boranda Sur-2 which received commercial declaration, Flamencos-3, close to initiate extensive testing and Lyria YW 12 which is already in extensive testing.
- Five were dry: Moyote-1, Boranda Sur-1, Boranda Centro-1, Chimuelo-1, and Silverback-2.
- Fourth are in the evaluation stage: Basari-1, Carnaval-1, Cira 3540, and Ibamaca-1.
- One was plugged and abandoned: EST SN-8 study well.

Four wells were drilled in the activity operated on a risk-only basis by the partner: Perla Negra-1, Perla Negra-1 ML1, Cayena 1 ST1 ML1 and Cayena 1 ST 1 ML2.

By year end, 4 wells were being drilled (EST SN-15, Bololó-1, El Niño-2 y Boranda Sur-3). In January 2022, an announcement was made regarding 17° API crude oil discovery in the exploratory well of Ibamaca-1 (Hocol 100%), located within the block Tolima Exploration and Production Agreement. Hocol is currently doing the corresponding analyses to define the extensive testing plan to be followed in the upcoming months.

Accumulated production in initial and extensive tests and post-commercialization exploratory wells reached 1,592,949 boe by year end (4,364 boe on average), with 65% of production corresponding to oil and 35% to gas.

Continuing the seismic data acquisition activities domestically, Ecopetrol through the Hocol subsidiary acquired 83.98 km of 2D seismic in the SN 18 block. Internationally, the Ecopetrol Óleo e Gás do Brasil Ltda subsidiary acquired 73.371 km of 3D seismic of the Nébulas programs, Picanha in the Saturo Block and the Santos basin to evaluate the prospectivity and the exploratory potential of these areas. Furthermore, Ecopetrol America LLC acquired 2,375 km of seismic data in the Gulf of Mexico to advance in the maturing of 8 prospects in the Strategic Alliance with Chevron.

During the National Hydrocarbons Agency's (ANH for its Spanish acronym) Colombia 2021 Round, Ecopetrol was awarded three areas in Technical Evaluation (TEAs for its acronym in Spanish) in the Mid-Magdalena Valley basin and one block for Exploration and Production in the Llanos Orientales basin. Likewise, the Hocol affiliate was awarded a block for Exploration and Production in the Sinú San Jacinto basin.

As part of round 17 offered by the Agência Nacional do Petróleo, Gás Natural e Biocombustíveis ANP, Ecopetrol, in consortium with Shell as operator, obtained 30% of the participation in the S-M-1709 block located south of the Santos basin.

Regarding the strengthening of the gas strategy, during 2021 Ecopetrol successfully drilled the exploratory well Liria YW12 in the Piedemonte basin. The plan for 2022 includes the continuation of testing in Liria YW12 and

advance with the delimitation plan of the discovery. In turn, Hocol performed exploratory activities in the northern areas of Colombia with the drilling of the wells Basari-1 and Carnaval-1, which determined the presence of gas and are currently under evaluation.

In respect of the Colombian offshore, Shell, as our operations partner in the Fuerte Sur, Purple Angel and COL-5 blocks, is moving forward with the activities for the drilling of the Gorgon-2 appraisal well, which is planned to start in the first quarter of 2022. This well is key in defining possible developments regarding this discovery and to enable other exploratory opportunities that have been identified in the area.

In 4Q21 a commerciality study was concluded and the conceptual development plan for the Gato do Mato discovery of the Blocks BM-S-54 and Sul de Gato do Mato. This project was transferred to the Brazil subsidiary's Development and Production Management department, with the expectation to initiate first production between the fourth quarter of 2025 and the first quarter of 2026.

Production

Table 7: Gross Production – Ecopetrol Group

Production - mboed	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Crude Oil	492.9	502.8	(2.0%)	485.9	516.0	(5.8%)
Natural Gas	129.8	130.2	(0.3%)	125.2	121.8	2.8%
Total Ecopetrol S.A.	622.8	633.0	(1.6%)	611.1	637.8	(4.2%)
Crude Oil	16.3	19.9	(18.1%)	18.1	20.2	(10.4%)
Natural Gas	20.9	20.3	3.0%	19.4	15.4	26.0%
Total Hocol	37.2	40.2	(7.5%)	37.5	35.6	5.3%
Crude Oil	0.0	0.0	-	0.0	1.1	(100.0%)
Natural Gas	0.0	0.0	-	0.0	0.9	(100.0%)
Total Equion*	0.0	0.0	-	0.0	2.0	(100.0%)
Crude Oil	0.0	3.0	(100.0%)	0.2	3.1	(93.5%)
Natural Gas	0.0	1.0	(100.0%)	0.0	0.9	(100.0%)
Total Savia	0.0	4.0	(100.0%)	0.2	4.0	(95.0%)
Crude Oil	8.5	9.5	(10.5%)	9.4	10.4	(9.6%)
Natural Gas	1.2	1.6	(25.0%)	1.5	1.8	(16.7%)
Total Ecopetrol America	9.7	11.1	(12.6%)	10.9	12.2	(10.7%)
Crude Oil	16.3	3.9	317.9%	13.5	3.8	255.3%
Natural Gas	8.7	2.2	295.5%	5.8	1.4	314.3%
Total Ecopetrol Permian	25.0	6.1	309.8%	19.3	5.2	271.2%
Crude Oil	534.0	539.1	(0.9%)	527.1	554.6	(5.0%)
Natural Gas	160.6	155.3	3.4%	151.9	142.2	6.8%
Total Ecopetrol Group	694.7	694.4	0.0%	679.0	696.8	(2.6%)

* Equion subsidiary reported production until february 29, 2020 when the Piedemonte association contract was terminated. Starting March 1, 2020 the corresponding production is reported 100% by ECP (Pauto y Floreña fields).

Notes: gross production includes royalties and is prorated by the Ecopetrol participation in each entity. Natural gas production includes white products. Gas + GLP production for 12M2021 was 143.4 mboed and for 4Q2021 was 151.2 mboed

In 2021, the Ecopetrol Group produced 679.0 mboed as compared to 696.8 mboed in 2020, a decrease of 2.6%. Ecopetrol S.A. contributed 611.1 mboed and its subsidiaries c with 67.9 mboed. Natural gas (gas + white products) contributed 22.4% (151.9 mboed), increasing 6.8% with respect to 2020.

Compared to 2020, the decrease in production was primarily due to public order events, strong rainy season in Colombia, the hurricane season in the Gulf of Mexico and temporary production restrictions in the Castilla field, which in turn were mainly associated with water management.

Production in 4Q21 was 694.7 mboed, a 11 mboed increase as compared to 3Q21 and remaining at similar levels as the same period of 2020. This recovery is mainly due to: i) better gas and white sales at the Cusiana, Cupiagua and Guajira fields; ii) the start of operations of the Promioriente Gas Pipeline in December; iii) the reception of six operating fields of the Nare asset, after the termination of the association contract with Mansarovar Energy

Colombia Ltda; iv) increased activity mainly at the Caño Limón, Quifa and Castilla fields and the Permian; and, v) the entry into operation of the codilution projects at the Cusiana and Apiay fields.

In terms of drilling operations, during 2021 a total of 395 wells were drilled and completed, with an average occupancy of 20 drilling rigs, representing a 62% increase in activity compared to 2020. Of the drilled wells in the year, 110 were drilled and completed in 4Q21 with an average occupancy of 27 drilling rigs.

Recovery Program

In 2021, secondary and tertiary recovery technology fields contributed 38% of the Ecopetrol Group's total daily production, maintaining their contribution at similar levels to those of 2020. This contribution comes from 31 fields currently under execution which have ongoing pilots or projects with this type of technology.

During 4Q21 we continued with the maturity and execution of secondary and tertiary recovery pilots, highlighting the tertiary recovery pilots of "CEOR"⁷ in the Cira Infantas and Dina T fields, successfully completing the polymer injection stage in order to initiate the evaluation stage and subsequent expansion.

Table 8: Recovery Pilots – Ecopetrol Group

Tecnología	En evaluación del piloto	En maduración de proyectos
No Térmico	10	15
Inyección de agua	7	10
Optimización inyección de agua	0	1
Inyección de agua mejorada	3	4
Inyección de gas	0	0
Térmico	1	2
Inyección de vapor	0	2
Inyección de aire	1	0
TOTAL	11	17

Comprehensive Research Pilot Projects (PPII) in Unconventional Reservoirs

Regarding the Comprehensive Research Pilot Projects (PPII), on October 29, 2021 the Environmental Impact Assessment (EIA) of the Kalé PPII was filed in order to request the Environmental License from the Environmental Authority. On November 12, 2021 the Ministry of the Environment issued the Order for the Public Hearing which was held during the present month of February, 2022. The Environmental Authority also conducted an evaluation visit to the project's area of influence as part of the license evaluation process.

With respect to the Platero PPII, during 4Q21 primary information was collected for the highest rainfall season and forums were created to address participation guidelines, so that communities and stakeholders could be informed about the project. In February 2022, the Environmental Impact Assessment was filed with the National Environmental Licensing Authority (ANLA).

Permian

During 2021, Ecopetrol and OXY as part of Rodeo joint venture in the Permian basin reported operating results that were above expectations. Ecopetrol's average annual production before royalties was 19.3 mboed. The JV drilled 89 wells in 2021 bringing the total number of wells to 132. Additionally, 82 wells were brought onstream for 2021 bringing the total number of wells to 104. During, 4Q21, JV production exceeded 50.0 mboed, representing a net to Ecopetrol of 25.0 mboed before royalties.

Executing its operations activities, in 2021 the joint venture achieved significant operational milestones and set records including:

- Fastest well drilled in 8.15 days (spud to rig release).
- Achieving a drilling speed of more than 9,500 ft/24 hours in the horizontal section.
- Drilled the first 15,000 ft well of lateral length.
- Achieved a record continuous pumping time in completion activities of 22.8 hours per day.

⁷ CEOR: Chemical Enhanced Oil Recovery

In terms of the environmental achievements; i) built a state of the art water recycling facility, with capacity to treat 65 kbls/d and 3 MMbbls storage, allowing the JV to recycle and reuse around 7.7 MMbbls of water in completion operations; and, ii) replacement of 15% of diesel fuel for compressed natural gas (CNG) in drilling and completion operations.

Finally, the knowledge transfer process continues, counting to date with 25 Ecopetrol employees assigned as secondees in the joint ventures's operations.

Lifting and Dilution Cost

Table 9: Lifting and Dilution Cost – Ecopetrol Group

USD/BI	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)	% USD
Lifting Cost*	8.97	8.42	6.5%	8.30	7.46	11.3%	20.5%
Dilution Cost**	4.85	2.64	83.7%	4.27	2.56	66.8%	100.0%

* Calculated based on produced barrels without royalties. Lifting Costs calculation for 1Q21, 2Q21 y 3Q21 were modified to eliminate an item which previously had been incorrectly included. As such, the lifting cost of 1Q21 changes from 7.51 to 7.52 USD/BI, 2Q21 from 8.02 to 8.03 USD/BI and 3Q21 from 8.45 to 8.46 USD/BI. In turn, the lifting cost for the H121 6M21 changes from 7.77 to 7.78 USD/BI, while the 9M21 cost changes from 8.01 to 8.02 USD/BI.

** Calculated based on sold barrels

Lifting Cost

The accumulated lifting cost for 2021 was 8.30 USD/BI, a 0.84 USD/BL increase as compared to 2020, mainly due to:

Cost Effect (USD +0.73 USD/BI): Increase in costs mainly due to: i) reactivation of activities in 2021 following the lifting of restrictions related to the COVID-19 pandemic; ii) an increase in costs, primarily due to external events related to public order and third-party blockades; iii) increase in-well interventions to counteract field declines; iv) an increase in the number of operation maintenance, civil works and integrity as part of the reactivation; v) increase in electric power, primarily due to higher global energy tariffs and increased consumption of the National Interconnection System (SIN for its Spanish acronym); vi) an increase in labor costs, primarily due to actuarial calculation; and, vii) upsurge in areas of support to the operation, primarily due to increased activity.

Exchange Rate Effect (USD -0.11 USD/BI): Increase in the COP/USD exchange rate of +50 COP/USD.

Volume Effect (USD +0.22 USD/BI): Lower production.

Dilution Cost

The cumulative dilution for 2021 was 4.27 USD/BI, an increase of 1.71 USD/BI, mainly due to: i) an increase of 30.06 USD/BI in the naphta purchase price as compared to 2020, related to the favorable movement of Brent price and the recovery of market conditions; ii) a favorable COP/USD exchange rate impact as a result of the devaluation of the Colombian peso against the US dollar of 49.73 COP/USD; and iii) lower purchase volume of barrels of naphtha (4 mbls) which in turn was primarily due to the lower production of heavy crude oils.

Financial Results for the Segment

Table 10: Income Statement – Upstream

Billion (COP)	4Q 2021	4Q 2020	Δ (\$)	Δ (%)	12M 2021	12M 2020	Δ (\$)	Δ (%)
Total revenue	19,603	10,453	9,150	87.5%	63,112	36,644	26,468	72.2%
Depreciation, amortization and depletion	1,460	1,648	(188)	(11.4%)	6,624	6,254	370	5.9%
Variable costs	7,737	4,784	2,953	61.7%	24,145	17,365	6,780	39.0%
Fixed costs	2,703	2,526	177	7.0%	9,566	9,275	291	3.1%
Total cost of sales	11,900	8,958	2,942	32.8%	40,335	32,894	7,441	22.6%
Gross income	7,703	1,495	6,208	415.3%	22,777	3,750	19,027	507.4%
Operating and exploratory expenses	1,793	1,639	154	9.4%	4,489	2,590	1,899	73.3%
Operating income	5,910	(144)	6,054	(4,204.2%)	18,288	1,160	17,128	1,476.6%
Financial result, net	(621)	(271)	(350)	129.2%	(2,113)	(1,358)	(755)	55.6%
Share of profit of companies	(3)	(3)	0	0.0%	10	(41)	51	(124.4%)
Income before income tax	5,286	(418)	5,704	(1,364.6%)	16,185	(239)	16,424	(6,872.0%)
Provision for income tax	(1,385)	137	(1,522)	(1,110.9%)	(4,737)	72	(4,809)	(6,679.2%)
Consolidated net income	3,901	(281)	4,182	(1,488.3%)	11,448	(167)	11,615	(6,955.1%)
Non-controlling interest	24	18	6	33.3%	89	79	10	12.7%
Net income attributable to owners of Ecopetrol before impairment	3,925	(263)	4,188	(1,592.4%)	11,537	(88)	11,625	(13,210.2%)
(Expense) income from impairment of long-term assets	438	338	100	29.6%	438	(180)	618	(343.3%)
Deferred tax on impairment	(135)	(134)	(1)	0.7%	(135)	17	(152)	(894.1%)
Net income attributable to owners of Ecopetrol	4,228	(59)	4,287	(7,266.1%)	11,840	(251)	12,091	(4,817.1%)
EBITDA	7,737	1,836	5,901	321.4%	25,723	6,684	19,039	284.8%
EBITDA Margin	39.5%	17.6%	-	21.9%	40.8%	18.2%	-	22.6%

The upstream segment's **revenues** for 2021 and 4Q21, compared to the same periods of 2020, increased mainly due to: i) the increase in Brent prices; ii) the strengthening of crude oil differentials; iii) a higher exchange rate, and increased crude oil export sales in 4Q21; however, partially offset by lower sales volume associated with a decrease in production.

The upstream segment's **cost of sales** for 4Q21 and 2021 increased compared to the same periods of 2020, mainly as a result of:

- Higher purchase costs, which in turn was primarily due to higher crude oil prices, partially, offset by lower purchased volumes to the ANH, which in turn was mainly attributed to lower production.
- Greater cost execution because of: i) increased consumption of regulated energy at the Cravo Norte field, in connection with a project to reduce such field's carbon footprint by modifying the energy source used for self generation; ii) an increase in the higher number of well interventions, maintenance, and integrity works, associated with the accumulation of activities in 4Q21 because of postponement in 2Q21 due of the public order situation; iii) increase in-process materials and support areas associated with the reactivation of operational activities.
- Increased levels of crude oil inventory, associated with shipments in transit to India to be completed in 1Q22.
- Higher transport costs as a result of: i) a higher COP/USD exchange rate; ii) an annual update in oil pipeline tariffs; and, iii) costs associated with the execution of reversal cycles for the Bicentenario pipeline given fewer operating days of the Caño Limón - Coveñas pipeline; partially offset by, iv) lower transported volumes which in turn was due to lower production.

The upstream segment's **operating expenses** (net of other income) for 2021 and 4Q21 increased compared to the same period in 2020, mainly due to:

- Update in public works and environmental costs provisioning,
- Crude oil thefts in the OTA and Caño-Limón pipelines,
- Increase in freight charges as a result of commercial agreements with China and Korea,

- Acquisition of seismic data in Brazil and Ecopetrol America, as well as geology and geophysics studies mainly by Ecopetrol S.A.'s. Onshore East and West Areas,
- Recognition of the exploratory activity of unsuccessful wells (Silverback-2 in Ecopetrol America, Moyote-1 in Mexico, Aguas Blancas 11 and 24, Chimuelo-1, Boranda Centro-1 and Lorito Este-1 in Ecopetrol S.A.),
- Update in dry wells abandonment costs.

The upstream segment's **net financial expense** (non-operating) for 2021 and 4Q21 compared to the same period of 2020, increased mainly because of: i) effect of the COP/USD exchange rate resulting from the devaluation of the Colombian peso against the US dollar given the segment's passive position in US dollars; and, ii) lower investment portfolio returns.

2. MIDSTREAM

Table 11: Volumes Transported – Ecopetrol Group

mbd	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Crude Oil	759.0	759.6	(0.1%)	730.0	785.6	(7.1%)
Products	289.6	266.9	8.5%	277.2	231.5	19.7%
Total	1,048.6	1,026.5	2.2%	1,007.2	1,017.1	(1.0%)

Note: Reported volumes subject to adjustments in volumetric quality compensation (CVC), associated to official volumetric balances.

Total volume transported by year end 2021 totaled 1,007.2 mbd, representing a slight decrease of 9.9 mbd as compared to 2020, primarily due to the decrease in the transport of crude oil as a result of lower production mainly in the Llanos Orientales area. However, the volume of refined products transported compared to the previous year increased by 19.7%. In 4Q21, the total volume transported increased by 22.1 mbd as compared to 4Q20, primarily due to the increase in the transport of refined products, which in turn was primarily the result of the reactivation of economic activities.

Crudes: In 2021, volumes transported decreased 7.1% as compared to 2020, ending the year at 730.0 mbd, primarily as a result of lower production, mainly in the Llanos region. In 4Q21, volumes transported remained similar to the results for 4Q20 levels, primarily due to the combined effect of higher volumes transported through the south corridor (8.9 mbd), and a decrease in the evacuation towards Coveñas and the connecting corridors for the Barrancabermeja refinery (9.4mbd). Approximately 85.3% of the crude oil volume transported is owned by the Ecopetrol Group.

In 4Q21, eight reversal cycles of the Oleoducto Bicentenario were carried out, with an evacuated volume of 2.6 million barrels in order to ensure the evacuation of the Caño Limón field after the damages that were caused to the pipeline by third parties and by the landslide that occurred in the village of La China in the municipality of Toledo, in the Norte de Santander department. After carrying out repair work, the pipeline resumed operations on November 29.

During 4Q21, there were 8 attacks against oil pipelines caused by third parties, representing a decrease of 33% compared to 4Q20. However, in a positive trend, the installation of illicit valves decreased by 22.5% in 4Q21 as compared to 4Q20.

Refined Products: In 2021 the volumes of refined products transported totaled 277.2 mbd, an increase of 19.8% compared to 2020, mainly due to the effect of the reactivation of economic activity, while in 4Q21 the increase was 8.5% compared to 4Q20. Approximately 29.5% of the volume transported during the year through multipurpose pipelines corresponded to Ecopetrol products. During 4Q21, the installation of illicit valves increased by 135.3% compared to 4Q20.

Leveraging the receipt of crude oil from the Nare Association: On November 5, 2021, Ecopetrol received from Masarovar the Jazmín, Nare Sur, Under River, Moriche, Abarco and Girasol fields. Until then, the transportation

of crude oil from these fields had been carried out through the OVG (Velasquez - Galan pipeline owned by Mansarovar).

On October 28, Mansarovar suspended pumping through the OVG pipeline; Cenit implemented a successful action plan to achieve the transportation of the production of the fields, ensuring processes safety and the equipment integrity at the Vasconia Station, with the added value that the dilution systems are being used to ensure blends with naphtha in the qualities required for dispatch to Barrancabermeja Refinery (GRB) and Oleoducto de Colombia (ODC) pipeline to Coveñas. Simultaneously, transport through the Vasconia - GRB System increased by 10 mbd.

Co-dilution in Apiay and Cusiana: The co-dilution projects in the Apiay and Cusiana fields made feasible the use of LPG as a diluent for crude oil through the installation of facilities in the plants. This service allows the client the use of a more economical diluent with a higher dilution factor, in addition to the fact that LPG is a fuel sourced from a nearby production site close to the blending point, reducing imported naphtha volumes.

Transport of fuels to the Llanos Region through the Apiay multipurpose pipeline: Due to the transport of refined products through the multipurpose pipeline and the development of the Apiay filling station, which entered into operation on December 7, 2021, about 600 trips per month of tanker trucks on the route to the Llanos Orientales are being replaced, ensuring a reliable supply of the department of Meta, reducing CO₂ emissions and improving the transit conditions of the road.

Cost per Barrel Transported

Table 12: Cost per Barrel Transported –Ecopetrol Group

USD/BI	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)	% USD
Cost per Transported Barrel	3.35	3.51	(4.6%)	3.00	3.14	(4.5%)	15.0%

The cumulative cost per barrel transported as of December 31, 2021 was 3.00 USD/BI, a decreased of 0.14 USD/BI as compared to December 31, 2020, mainly due to:

Cost Effect (-0.14 USD/BI): Reduction in variable cost, primarily as a result of a lower consumption of materials, which in turn was primarily due to the decreased in the volumes of crude transported. In addition, there was a decrease in depreciation as a result of the modification at the end of 2020 of the useful lives of Los Llanos and Bicentenario pipelines.

Volume Effect (+0.04 USD/BI): Higher cost per barrel, primarily due to lower transported volume derived from lower production, partially offset by an increase in the volume of products purchased because of the recovery of the demand for gasoline and diesel in the country.

Foreign Exchange Rate Effect (-0.04 USD/BI): Higher exchange rate by 49.7 COP/USD when re-expressing costs from COP into USD.

The cost per barrel transported for 4Q21 was 3.35 USD/BI, a decrease of 0.16 USD/BI compared to 4Q20.

Financial Results for the Segment

Table 13: Income Statement – Midstream

Billion (COP)	4Q 2021	4Q 2020	Δ (\$)	Δ (%)	12M 2021	12M 2020	Δ (\$)	Δ (%)
Total revenue	3,373	3,061	312	10.2%	12,158	12,194	(36)	(0.3%)
Depreciation, amortization and depletion	300	281	19	6.8%	1,168	1,253	(85)	(6.8%)
Variable costs	157	143	14	9.8%	532	567	(35)	(6.2%)
Fixed costs	481	437	44	10.1%	1,560	1,561	(1)	(0.1%)
Total cost of sales	938	861	77	8.9%	3,260	3,381	(121)	(3.6%)
Gross income	2,435	2,200	235	10.7%	8,898	8,813	85	1.0%
Operating expenses	(270)	375	(645)	(172.0%)	269	935	(666)	(71.2%)
Operating income	2,705	1,825	880	48.2%	8,629	7,878	751	9.5%
Financial result, net	59	(211)	270	(128.0%)	207	170	37	21.8%
Share of profit of companies	1	0	1	-	1	(2)	3	(150.0%)
Income before income tax	2,765	1,614	1,151	71.3%	8,837	8,046	791	9.8%
Provision for income tax	(884)	(583)	(301)	51.6%	(2,799)	(2,584)	(215)	8.3%
Consolidated net income	1,881	1,031	850	82.4%	6,038	5,462	576	10.5%
Non-controlling interest	(296)	(246)	(50)	20.3%	(1,161)	(1,119)	(42)	3.8%
Net income attributable to owners of Ecopetrol before impairment	1,585	785	800	101.9%	4,877	4,343	534	12.3%
(Expense) income from impairment of long-term assets	(164)	338	(502)	(148.5%)	(166)	341	(507)	(148.7%)
Deferred tax of impairment	57	(100)	157	(157.0%)	58	(101)	159	(157.4%)
Net income attributable to owners of Ecopetrol	1,478	1,023	455	44.5%	4,769	4,583	186	4.1%
EBITDA	3,070	2,153	917	42.6%	10,025	9,287	738	7.9%
EBITDA Margin	91.0%	70.3%	-	20.7%	82.5%	76.2%	-	6.3%

Revenues in 2021 decreased slightly compared to 2020 mainly because of the effect of: i) lower crude transported volumes as a result of the reduction in production, and ii) revenue reduction because of the Continuity Plan Margin that was included in the pricing structure for refined products until April 2021. These effects are partially compensated by an increase in revenues associated with refined products transported volumes increase due to the recovery of demand and 19 reversal cycles in the Bicentenario Pipeline throughout the year, with an evacuated volume of 5.3 million barrels.

With respect to 4Q21, revenues increased when compared to 4Q20, mainly due to: i) eight reversal cycles of Oleoducto Bicentenario, with a transported volume of 2.6 million barrels; ii) the approval of the settlement agreement with Frontera; iii) an increase in transported volumes of refined products as a result of the recovery in demand throughout 2021; and, iv) a higher average COP/USD exchange rate. These positive effects were partially offset by the elimination of the revenues from the Continuity Plan Margin, which was part of the price structure of refined products until April 2021.

Cost of sales for 2021 decreased versus 2020 mainly as a result of i) lower depreciation due to the extension of the useful lives of Bicentenario and ODL pipelines, and ii) a reduction in variable costs of materials related mainly to lower crude transported volumes. With respect to 4Q21, cost of sales increased compared to 4Q20 mainly due to the effect of i) an increase in maintenance activities; and, ii) an increase in the variable costs of electrical power and materials, mainly associated with higher volumes of transported refined products and the reversal cycles registered in 4Q21.

Operating expenses (net of income) decreased in 2021 as compared to 2020 and in 4Q21 as compared to 4Q20 mainly due to the effect of the settlement agreement, in which Frontera recognized to Bicentenario the value equivalent to a portion of the syndicated debt, as well as a compensation in favor of Cenit for the early termination of the contracts.

Net financial result (non-operating) for 2021 versus 2020 and 4Q21 as compared to 4Q20 reflects the foreign exchange impact in the net active position in USD of the segment and the liquidation of foreign exchange hedges.

3. DOWNSTREAM

The refineries ended 2021 with a consolidated throughput of 353.6 mbd and an integrated gross margin of 10.2 USD/BI, compared to a consolidated throughput of 319.8 mbd and an integrated gross margin of 8.0 USD/BI in 2020, continuing a positive growth trend during 2021.

In 2021, the downstream segment was successful when facing a challenging environment as a result of: i) operational events and public order related obstructions; ii) continuing restrictions resulting from the extension of the COVID-19 pandemic; iii) scheduled major maintenance and operational events; which were managed through: i) an active inventory optimization in both refineries; ii) an efficient commercial strategy focused on margin improvements; iii) integrated planning across the chain to maximize supply and production opportunities; and iv) adjustments to scheduled maintenance strategy during the year that allowed capturing market opportunities.

In 4Q21, the refineries reached a consolidated throughput of 340.2 mbd which was impacted by the scheduled major maintenance intervention of one of Barrancabermeja's crude units, and an integrated gross margin of 12.5 USD/BI, a record since 2018, versus a throughput of 355.1 mbd and an integrated gross margin of 8.5 USD/BI in 4Q20. These results can be primarily attributed to: j) good operating performance at the Cartagena and Barrancabermeja refineries; ii) improvement in the refined products basket, in line with the general increase in demand due to the reactivation of the productive sector and year end seasonality; iii) seizing of the increase in the PP¹ – PGP² spread in Essentia; and, iv) cost of cash stability of the segment, among others.

Cartagena Refinery

**Table 14- Throughput, Utilization Factor, Production and Refining Margin
- Cartagena Refinery**

Cartagena Refinery	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Throughput* (mbd)	143.2	154.5	(7.3%)	142.6	140.6	1.4%
Utilization Factor (%)	92.1%	85.2%	8.0%	81.4%	76.1%	6.9%
Production (mbd)	136.8	151.8	(9.9%)	136.4	134.6	1.3%
Gross Margin (USD/BI)	13.3	6.6	101.5%	8.5	6.6	28.8%

* Corresponds to effective throughput volumes, not volumes received

Gross margin was 28.8% higher in 2021 as compared to 2020, while the 4Q21 results set a historical quarterly record. During 2021 the following achievements were reached: i) operational stability, in spite of the start of the first cycle of major maintenance activities in the Cracking and Alkylation units; ii) strengthening of product sales prices because of the improvement of indicators and active commercial activity, compensating higher crude oil prices; iii) better valuable products returns through inventories benefits in the Cracking unit and iv) higher local crude oil production in the feedstock. The aforementioned in spite of: i) throughput restrictions in the Crude unit (being at the end of its run cycle); ii) greater consumption of imported crude; and iii) higher discount on export diesel (RVO effect⁸).

The 4Q21 results reached a historical quarterly record that highlights the productive and financial potential of the Cartagena refinery when operating without any outside third party operating events and under favorable environmental conditions.

⁸ RVO or Renewable Volume Obligation: requirement to have a Renewable Volume Obligation, which is a percentage of the fuel manufactured and sold to the US public within the Renewable Fuel Standard (RFS) program. If any refiner and/or trader of vehicle fuels of in the United States does not comply with the requirements of the RFS program, they must assume a cost per gallon RIN (Renewable Identification Numbers).

Barrancabermeja Refinery

**Table 15- Throughput, Utilization Factor, Production and Refining Margin
- Barrancabermeja Refinery**

Barrancabermeja Refinery	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Throughput* (mbd)	196.9	200.6	(1.8%)	211.0	179.2	17.7%
Utilization Factor (%)	71.6%	70.1%	2.1%	76.9%	64.1%	19.9%
Production (mbd)	200.8	203.9	(1.5%)	214.6	182.4	17.7%
Gross Margin (USD/Bl)	11.9	9.9	20.2%	11.5	9.1	26.4%

* Corresponds to effective throughput volumes, not volumes received

The gross margin for 2021 exceeded 2020 results, reaching 11.5 USD/Bl, While the 4Q21 results were the highest in the last 3 years. During 2021 the following achievement were reached: i) operational stability during programmed major maintenance activities (Crude U-200, Alkylation, petrochemical plants and start of Orthoflow), ii) throughput increase, in line with the recovery of demand and the consequent yield improvements of medium distillate products and gasoline; iii) active commercial management in products and petrochemicals, generating better sales conditions, compensating higher crude prices; and iv) outstanding cost performance.

Esenttia

Table 16. Sales and Margin – Esenttia

Esenttia	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Total Sales (KTON)	131.1	145.2	(9.7%)	536.6	541.3	(0.9%)
Total Margin (USD/Ton)	289.8	247.0	17.3%	249.9	235.1	6.3%

In 2021, Esenttia's sales volume remained stable compared to 2020, while its total cumulative margin increased, primarily due to favorable market conditions associated with: i) increased demand that favored PP prices⁹; ii) lower Asian product availability due to logistic constraints; iii) the stable operation of the main PGP¹⁰ raw material supplier; and, iv) the implementation of a sales strategy to strengthen relations with traditional clients and increase market share in countries with higher profitability.

In 4Q21, Esenttia's total margin grew by 17% as compared to 4Q20 which, in addition to the aforementioned, is also due to the decrease in the cost of raw materials (PGP) in 4Q21.

Invercolsa

At the end of 2021, Invercolsa had exceeded its 2020 results by: i) 4% in natural gas volume, which in turn was primarily due to progress in campaigns to encourage gas consumption in commercial and VNG segments¹¹, as well as installation strategies for residential users to increase their volumes; ii) 80% in installations primarily as a result of the economic reactivation; and iii) 13% in total consolidated EBITDA mainly driven by dividends, installations and natural gas.

In 4Q21, gas installations increased by 70% as compared to 4Q20, primarily due to the economic reactivation and implementation of promotional strategies carried out with service providers, focused on the reliability of gas installations.

⁹PP: Polypropylene raw material

¹⁰ PGP: Polymer grade propylene

¹¹ VNG: Vehicular natural gas

Refining Cash Cost

Table 17: Refining Cash Cost

USD/BI	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)	% USD
Refining Cash Cost	4.95	4.93	0.4%	4.48	4.98	(10.0%)	16.3%

* Includes Barrancabermeja and Cartagena Refineries, and Esentia

The accumulated refining cash cost as of December 31, 2021 was 4.48 USD/BI, a decrease of 0.50 USD/BI as compared to the cash cost as of December 31, 2020, mainly as a result of the following:

Cost & Volume Effect (-0.44 USD/BI): mainly due to a higher crude throughput at the Barrancabermeja (+32 mbd) and the Cartagena refinery (+2 mbd), in each case primarily due to increased demand.

Exchange Rate Effect (-0.06 USD/BI): higher exchange rate by +49.73 COP/USD when re-expressing costs from COP into USD.

The refining cash cost for 4Q21 was 4.95 USD/BI, an increase of 0.02 USD/BI compared to 4Q20.

Financial Results for the Segment

Table 18: Profit or Loss Statement – Downstream

Billion (COP)	4Q 2021	4Q 2020	Δ (\$)	Δ (%)	12M 2021	12M 2020	Δ (\$)	Δ (%)
Total revenue	15,938	7,572	8,366	110.5%	50,976	26,104	24,872	95.3%
Depreciation, amortization and depletion	365	371	(6)	(1.6%)	1,459	1,474	(15)	(1.0%)
Variable costs	14,074	6,393	7,681	120.1%	44,861	22,395	22,466	100.3%
Fixed costs	601	553	48	8.7%	2,215	1,956	259	13.2%
Total cost of sales	15,040	7,317	7,723	105.5%	48,535	25,825	22,710	87.9%
Gross income	898	255	643	252.2%	2,441	279	2,162	774.9%
Operating expenses	502	512	(10)	(2.0%)	1,718	1,683	35	2.1%
Operating income (loss)	396	(257)	653	(254.1%)	723	(1,404)	2,127	(151.5%)
Financial result, net	(395)	222	(617)	(277.9%)	(1,260)	(1,294)	34	(2.6%)
Share of profit of companies	37	(1)	38	(3,800.0%)	201	131	70	53.4%
Loss before income tax	38	(36)	74	(205.6%)	(336)	(2,567)	2,231	(86.9%)
Provision for income tax	293	(213)	506	(237.6%)	405	645	(240)	(37.2%)
Consolidated net income	331	(249)	580	(232.9%)	69	(1,922)	1,991	(103.6%)
Non-controlling interest	(37)	(13)	(24)	184.6%	(174)	(114)	(60)	52.6%
Net income attributable to owners of Ecopetrol before impairment	294	(262)	556	(212.2%)	(105)	(2,036)	1,931	(94.8%)
(Expense) income from impairment of long-term assets	(309)	(71)	(238)	335.2%	(305)	(782)	477	(61.0%)
Deferred tax of impairment	113	44	69	156.8%	112	175	(63)	(36.0%)
Net income attributable to owners of Ecopetrol	98	(289)	387	(133.9%)	(298)	(2,643)	2,345	(88.7%)
EBITDA	1,173	345	828	240.0%	3,528	869	2,659	306.0%
EBITDA Margin	7.4%	4.6%	-	2.8%	6.9%	3.3%	-	3.6%

EBITDA for 4Q21 was the best in the year, and contributed to a historical record for 2021 for the consolidated segment, for the refineries as well as Esentia and Invercolsa, primarily as a result of i) throughput and margins recovering; ii) the implementation of an active inventory management strategy; and, iii) the commercial strategy in place to capture benefits from a favorable economic environment.

Revenues in 2021 as compared to 2020 and 4Q21 as compared to 4Q20 increased primarily because of: i) recovery in product differentials associated with market factors, mainly in gasoline, middle distillates and petrochemicals, despite a higher discount in export diesel (RVO effect), and; ii) growth in the national demand for fuels. In particular, Invercolsa grew its revenues primarily through greater commercialization of natural gas and gas installations, which were stable throughout 2021. Esentia's performance is also highlighted, mainly due to i) the spike in polypropylene margins in 4Q21 and ii) the good sales results derived from its commercial strategy.

Cost of sales for 2021 as compared to 2020 increased mainly due to: i) higher prices of the refineries' crude feedstock and product imports; and ii) the higher throughput volume given the recovery in demand. However, in 4Q21 there was an increase in costs as compared to 4Q20 primarily due to: i) higher prices of the refineries' crude feedstock and product imports; ii) a higher volume of product imports, mainly diesel and gasoline, as a consequence of the increase in demand and the operational challenges in the Cartagena Refinery; partially offset by lower refinery throughputs due to scheduled shutdowns.

Operating expenses (net of income) for 2021 increased as compared to 2020 primarily as a result of: i) the effect of technical shutdowns at the Cartagena refinery; and ii) higher marketing expenses given increased sales. On the other hand, operating expenses decreased slightly in 4Q21 as compared to 4Q20, primarily as a result of lower administrative expenses.

The **financial result** (non-operating) for 2021 is at a level similar to that of 2020. However, with respect to expenses in 4Q21 were higher as compared to 4Q20, primarily as a result of the exchange rate effect given the devaluation of the Colombian peso against the US dollar as the segment maintains a net liability position in US dollars.

4. ENERGY TRANSMISSION AND TOLL ROADS

On February 23, 2022, ISA announced its financial and operating results for 4Q21 to the market, which can be accessed on the Company's website at <https://www.isa.co/en/investors/>. Some relevant operating and financial details thereof are highlighted below:

Energy Transmission

During 4Q21, the entry into operations of the following projects took place: i) in Chile, the expansion SE of the Nueva Maitencillo and Nuevo Pan de Azúcar (*Ampliación SE*) to expand the substation capacity and strengthen the Chilean transmission system; ii) in Peru, through Transmantaro Consortium, the connection of Petroperu's Talara refinery to the STN to expand power transmission capacity and improve reliability took place; and, iii) in Brazil 41 reinforcements and improvements were made. These projects are expected to generate annual revenues of USD 8.9 million.

The construction of the 29 projects continues, these projects are expected to begin operations between 2022 and 2025 and are located in countries where ISA has a presence, and once in operation will generate annual revenues of USD 334.2 million.

Regarding new businesses, the following stand out:

- In December, the Kimal–Lo Aguirre transmission line was awarded to the Yallique consortium, comprised of Transelec, ISA Inversiones Chile and China Southern Power Grid International. The project consists of the construction of a bipolar HVDC (High Voltage Direct Current) transmission line with a capacity of 3,000 MW at 600 kV and will extend for more than 1,400 km. In Chile, it is the first direct-current line, a technology that allows greater transmission capacity with lower transport losses than projects with alternate current, and does not require intermediate substations. The project is expected to interconnect renewable energy projects located in the north of Chile with the center and south of the country, thus leveraging the decarbonization of the energy matrix.
- In Brazil, ISA through its subsidiary ISA CTEEP will develop the first large-scale storage project in the Brazilian transmission system. The project was awarded in 4Q21 and will be installed at the Registro Substation in the southern part of São Paulo, with an installed capacity of 30 MW. This project, along with grid reinforcements that will be completed, is expected to benefit around 2 million people in the region.

Toll Roads

During 4Q21, construction was completed and 100% of the Ruta Costera project was placed in operation. This 146 km roadway runs through the departments of Bolívar and Atlántico and benefits approximately three million people in nine municipalities.

Progress continued on the construction of the Rutas del Loa projects, whose length is 136 km and is expected to become operational by 2023. Additionally, construction progressed in six projects of the Chilean road concessions, which will represent 52 km of improvements on several existing roads.

Financial Results

With respect to the results of the business the following is highlighted:

- The contribution to net income that can be attributed to Ecopetrol's shareholders in 4Q21 is COP 273 billion, and for the year since the acquisition of ISA took place COP 386 billion.
- The contribution to Ecopetrol Group's EBITDA was COP 2.6 trillion for 2021 with an important weight of the energy business representing 80.5% of such contribution.
- EBITDA for 4Q21 was leveraged by: i) the entrance in operations of projects in Colombia, Brasil, Chile and the consolidation of Piratininga-Bandeirantes Transmissora de Energia (PBTE), ii) a positive effect in revenues for IPCA (Extended Consumer Price Index, by its acronym in Spanish) and IGPM (General Market Prices Index, by its acronym in Spanish) in Brasil and IPP (Producer price index, by its acronym in Spanish), and iii) a positive effect of exchange rate in Colombia.
- Regarding non-operating results it is worth highlighting the recognition of additional financial expenses derived from: i) the consolidation of debt of PBTE, the increase in leverage incurred to finance the expansion of the Group and the greater expense due to foreign exchange recognition, and ii) the partial refinancing of the loan drawn by Ecopetrol for payment of ISA's acquisition, with which the debt maturity profile was optimized.

Additional information regarding ISA's contribution to the Ecopetrol Group's 4Q21 results can be found in the section "Financial Effect of ISA Consolidation" above.

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

Renewable Energies

With the entry into operation of the San Fernando solar park in October 2021 with an installed capacity of 61 MW, the Ecopetrol Group completed 112.5 MW of renewable energy into its supply matrix, representing 8% of the installed capacity, thus becoming the largest auto generator of renewable energy in Colombia.

For its part, the 21 MW Castilla solar park, which entered into operation in October 2019, has generated savings in energy costs of COP \$7.5 billion since its inception and a reduction of nearly 37,000 tons of CO₂ equivalent during the same period.

In 4Q21, progress continued in the agenda for incorporating renewable energies through the construction of the Brisas solar park (Huila), with an installed capacity of 26 MW, and the construction of the Cravo Norte solar park with an installed capacity of 40 MW; with these, a total of 178 MW of installed capacity will be reached, higher than the planned 158 MW, thus fulfilling 113% of the target. The entry into operation of these two projects is expected in 4Q22.

Energy Efficiency

The optimization of the accumulated energy demand since the beginning of the program execution in 2018 as of 4Q21 corresponds to a cumulative equivalent reduction of 25 MW in electrical energy (3.1%), savings of COP \$68.5 billion and 83,000 tons of CO₂e avoided. In 2021 the program focused on the analysis of new processes

with a focus on production wells, the start of analysis of process plants at the Barrancabermeja refinery and incorporation of new transport stations at Cenit. During 2021 a demand equivalent to 5 MW in electric energy was optimized, COP \$10.6 billion in savings and 16,000 tons of CO₂e avoided, these achievements allowed Ecopetrol to meet the goal of increasing energy efficiency by 3% by 2022.

Hydrogen

In December 2021, the renewable hydrogen strategy of the Ecopetrol Group was approved, built by an interdisciplinary team within the Ecopetrol Group. The plan focuses on developing four clean hydrogen applications: i) sustainable growth and decarbonization of own operations; ii) sustainable mobility; iii) mixture of hydrogen with gas for thermal applications; and, iv) new low-carbon emission products.

The roadmap establishes three time horizons to develop a robust hydrogen portfolio: The first horizon (to 2030) focuses on the sustainable expansion of the Ecopetrol Group operations and beginning to develop sustainable mobility; the second horizon (2030-2040) focuses on material results in the decarbonization of the Ecopetrol Group's own operations and the diversification into new businesses; and the third horizon (2040 onwards) seeks to expand the hydrogen portfolio for export and low carbon mobility.

In 1Q22, a concept test for the production of electrolytic hydrogen with a capacity of 50 kW is expected to be carried out in the Cartagena refinery with an electrolyzer already located at the refinery, with the respective facilities and electrical connections work now underway.

Integrated Water Management

At the end of 2021, 111.3 million cubic meters of water were reused (74% of the water required to operate), out of which 94.4 million were production water and 16.9 million were reused collected water, meeting 106% and 133% of the respective targets established for 2021. These results have been achieved thanks to the implementation of improved water reuse and recirculation practices¹² implemented at the Barrancabermeja and Cartagena refineries, as well as in the production fields.

As a relevant fact, at the end of 4Q21, the dumping of approximately 39% of the previously treated industrial water discharged into the Magdalena River from the Casabe and Llanito fields was eliminated.

Furthermore, in 2021 freshwater collection in cubic meters (40.1 million m³ of water), exhibited a 4% reduction with respect to the volume collected in 2020, mainly due to decreased injection volumes in production fields. This volume represents 26% of the total water required to operate by Ecopetrol during the year.

Likewise, in 2021, 2.3 million cubic meters of treated production water from the Castilla Field were reused in agricultural and livestock activities in the Agroenergy Sustainability Area (ASA) in the Municipality of Acacias (department of Meta), primarily due to the commissioning of a new sprinkler irrigation system.

Regarding the preventive disposal measures implemented in the Acacías station on the Guayuriba river, during 2021 Cormacarena ordered its provisional termination on June 11th; Ecopetrol deployed the necessary technical verifications and actions to reactivate the discharge, complying with quality criteria and parameters established in national regulations. The results of the physicochemical and hydrobiological monitoring show regulatory compliance per the parameters established in national and local regulations. Ecopetrol is waiting for the response to its request filed before Cormacarena on September 27, 2021 for the definitive termination of the preventive measure.

Climate Change - Decarbonization

During 2021, Ecopetrol updated its climate ambitions, committing to (i) reduce CO₂e emissions by 25% by 2030 as compared to emission levels as of 2019 (Scopes 1 and 2), ii) reduce its total emissions by 50% by 2050 (Scopes 1, 2 and iii) achieve zero net carbon emissions by 2050 (scopes 1 and 2).

¹²Reuse of wastewater in drilling activities, washing of equipment, reinjection activities, power generation and wells maintenance, among others.

Likewise, Ecopetrol adhered to the National Carbon Neutrality Program led by the Ministry of Environment and Sustainable Development, intending to join forces towards constructing sustainable and low-carbon growth, thus contributing towards the achievement of the goals established in the Nationally Determined Contribution (NDC) and the founding of the pillars to achieve the national goal of carbon neutrality.

As part of the roadmap for the decarbonization strategy of the operations and in line with the net-zero carbon emission strategy by 2050, during December the pilot of the first sale of a shipment for one million barrels of Castilla Blend® carbon offset FOB Coveñas was sent to Asia, which included the quantification and verification of production, dilution and transportation emissions. To this end, 32,000 carbon credits were purchased in the voluntary market to offset the tons of carbon emitted in the process.

Ecopetrol obtained a third-party verification of its Greenhouse Gas Inventory for the period 2017-2020, by the firm Ruby Canyon Environmental, Inc., an organization endorsed by the International Accreditation Forum (IAF). The results concluded that the emissions statement by the Ecopetrol Group is a fair representation of its emissions for the years reported. Within the framework of COP 26, in November 2021, a Voluntary Agreement was signed with the Ministry of Mines and Energy to encourage carbon neutrality and climate resilience in the hydrocarbon sector.

Concerning the results of the Dow Jones Sustainability Index, in November 2021, Ecopetrol's rating was increased, with Ecopetrol's Climate Change ranking higher than the average ranking (increasing from 70 to 90 points). Likewise, regarding the CDP report, the global rating of "C" was kept, which implies knowledge about climate-related impacts and issues. Specifically in this report, the Scope 3 rating increased, which addresses reduction goals and the identification of risks and opportunities. This rating is above the average performance of other companies in the region. For 2021, the Ecopetrol Group achieved a total yearly reduction of 293,594 tCO₂e through the implementation of new projects, exceeding the established target of 235,262 tCO₂e by 25%.

Additionally, methane emissions detection and measurement was carried out in 95% of production facilities using bottom-up technologies¹³ Through top-down technologies,¹⁴ 95% of the production facilities were covered, the Barrancabermeja and Cartagena refineries, the pilot project area in Unconventional Reservoirs and in assets with partners located in the Mid Magdalena area using an aircraft equipped with specific methane sensors, and covering a total of 1,205 km². Additionally, 663 leaks of the 774 leaks identified between 2019 and 2020 were sealed, a 103% compliance rate with respect to the plan. In 2021, a new detection campaign with greater coverage was carried out, finding 1,085 additional leaks for which an action plan has already been created. Of these latest identified leaks, 184 (17%) have already been closed.

Carbon Neutral Certification

In November and December 2021, Cenit and the Oleoducto de los Llanos and Oleoducto Bicentenario pipelines received the Carbon Neutral certification by the Colombian Institute of Technical Standards and Certifications (ICONTEC).

To achieve this, the companies developed a work plan with three major focus activities that also allow their certification to extend for three years. The first is the emissions inventory, which implies tabulating a monthly and annual emissions estimate regarding the companies' tons of CO₂e emission. The second is an emissions reduction portfolio, which entails continuing their expansion in renewable energies, and the third concerns continuing to apply Natural Climate Solutions as a compensation alternative, identifying opportunities for restoring strategic ecosystems in the country, protecting biodiversity, enhancing ecosystem services, and contributing to the construction of a sustainable economy in the territories.

Biodiversity

Within the framework of the national initiative "*Sembrar Nos Une*", the Ecopetrol Group has contributed 4,405,591 trees, which corresponds to fulfilling 110% of the goal established by the business group in 2021 (of 4,000,000 trees).

¹³Bottom-up technologies: in-situ methane detection, fixed cameras, cameras and flowmeters at ground level.

¹⁴Top-down technologies: aerial view methane detection with, for example, drones, planes, satellite images.

Regarding habitat conservation for biodiversity protection, the protective reforestation of 14.8 hectares was realized, 21.5 hectares of agroforestry systems were established, 34.5 hectares were implemented for forest grazing systems and 1.92 forest hectares were rehabilitated. Likewise, 33 new voluntary conservation agreements were signed, continuing with the follow-up and monitoring of 128 voluntary conservation agreements signed in previous years.

Within the framework of the Ecopetrol Group's emission reduction goals, the implementation of the Natural Climate Solutions portfolio began, seeking to develop emission reduction/removal projects. Five strategic alliances were signed with national and international organizations (TNC, WCS, Fundación Natura, South Pole, ISA's Conexión Jaguar) to carry out early actions in projects that provide carbon supply, with a potential of over 1 MtCO₂/year.

Ecopetrol committed to the One trillion trees (1t.org) of the World Economic Forum to protect 30,000 hectares of strategic ecosystems, plant 12 million trees and achieve the capture of at least 2 million tons of CO₂e by 2030. Furthermore, it was selected with 34 other global Nature-related Financial Disclosures Taskforce members (TNFD) to contribute towards the development of a framework for reporting risks and opportunities associated with natural capital.

Fifteen Eco-Reserves totaling 15,085 hectares in Santander, Meta, Casanare, Huila, Cundinamarca, Boyacá and Córdoba departments were designated by the Alexander Von Humboldt Institute, which assessed the environmental technical potential of the Ecopetrol Group's properties, , with a view to reach the target of 50 Eco-Reserves by 2030.

Air quality

In 2021, the Air Quality Roadmap was established, whose objectives are aligned with the Fuel Quality efforts, where Ecopetrol aims to contribute towards having clean air in the long term, based on the criteria and objectives set by the World Health Organization in its Air Quality Guidelines.

By reducing pollutant emissions to world-class standards, Ecopetrol will contribute towards improving air quality to protect environmental health. The Air Quality Roadmap establishes the use of best practices in emissions management that include:

- Verified inventory of atmospheric emissions of Criteria Pollutants¹⁵
- Defining targets for the reduction atmospheric emissions of Criteria Pollutants (CO; SO₂, NO₂; PM, and VOC).
- Air quality management based on the World Health Organization Air Quality Guidelines.
- Knowledge management and incorporation of technologies for prevention, control and monitoring of Criteria Pollutant emissions.

Planning and Environmental Authorizations

In 2021, 18 minor change decisions, one environmental license modification and two environmental management plan modifications were obtained from the National Environmental Planning Authority (ANLA), as well as 53 environmental authorizations issued by the Regional Autonomous Corporations. Worth noting is the environmental license obtained for the construction and operation of the Vasconia-Teca I gas line in November 2021, which will allow transporting a gas volume of close to 180 million cubic feet to be employed in energy production in activities associated with increasing hydrocarbons production within the Teca-Cocorná field. This license will allow to include activities associated with generating backup energy of up to 9 MW for the photovoltaic and thermosolar energy production modules in the facilities.

Likewise, the awarding of the Environmental License Modification Resolution 1257 of 2015 APE VMM32 is noteworthy, through which 16 channel occupations can be incorporated into this project, enabling the exploratory drilling of the Machín well. Additionally, Ecopetrol will contribute 14 kboe volumes, and will direct its exploration activities towards the search for gas.

¹⁵Criteria Pollutants: Among all the pollutants that exist in the atmosphere, 5 criteria pollutants were identified that affect health immediately upon inhalation: carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ground-level ozone (O₃), and particulate matter with an aerodynamic diameter of less than 10 µm (PM₁₀), and Volatile Organic Compounds (VOC). In addition to these, CO₂ (carbon dioxide) is included for its contribution to the greenhouse effect.

Social and Environmental Investment

In 2021, the Ecopetrol Group¹⁶ allocated resources for social, environmental and relationship investment in Sustainable Development Portfolio projects and initiatives, within the framework of Ecopetrol's Environment Strategy for a total amount of COP 469,161¹⁷ million, which include strategic and mandatory investments.

The Ecopetrol Group has been allocated COP 402,614 million from the "Obras por Impuestos" initiative (*Obras por Impuestos*) between 2017 and 2020, with 43 projects in 14 departments of the country. At the end of 2021, 28 projects have been completed amounting to COP 232,304 million, highlighting within these the following projects delivered during this fourth quarter: i) Endowments of educational venues in 11 municipalities of Casanare; and, ii) Endowments of educational venues in 7 municipalities of Putumayo. The interventions carried out through the "Works in lieu of Taxes" initiative are part of the Ecopetrol Group's commitment to contribute towards the revitalization of local economies to encourage economic reactivation insofar as their execution favors the generation of local employment.

Support to counteract health emergency and to the economic reactivation

The Ecopetrol Group, invested approximately COP 139,981 million in the "Apoyo País" Program 2020-2021 to counteract the COVID-19 pandemic's effects. The endowed resources were allocated as follows: COP 16,020 million in humanitarian assistance; COP 13,667 million in personal protection equipment and cleaning items; COP 30,755 million in medical equipment (over 100 thousand medical devices and instruments for pandemic response); COP 18,041 million in solidarity contributions (assistance for energy bill payments, "solidarity bonds"); implementation and start-up of R&D projects for COP 43,649 million (innovations, support for governmental digital projects); and COP 17,849 million towards post-pandemic economic reactivation projects and to initiate studies for projects such as the solar plant on the island of Providencia. This program officially ended in December 2021, with outcomes demonstrating solidarity with the national situation, extending to most of the national territory and implementing initiatives in alliance with the real sector, health institutions, territorial entities and national public programs.

Specifically, in 2020, the "Apoyo País" program focused on supporting efforts to counteract the COVID-19 pandemic and contributed a total of COP 7,266 million as of 4Q21, to benefit public health institutions in 25 municipalities nationwide. In 2022, the acquisition of medical equipment will be carried out to strengthen the public healthcare network of Bogotá. In the 2021 "Apoyo País" program, focused on economic reactivation, Ecopetrol contributed a total of COP 3,889 million in 4Q21, for a cumulative total of COP 13,571 million, in social investment projects benefiting over 4,600 people through inclusive rural development projects, business entrepreneurship and infrastructure for educational institutions. In 4Q21 Ecopetrol was the winner of the Corporate Social Responsibility category in the 2021 awards of the *Portafolio* publication, "Mejor Gente, Mejor País" (Better People, Better Country).

Communities and Environment

Within the framework of receiving Campo Nare, roundtables were established in Puerto Boyacá to address issues concerning labor, goods and services, and social and environmental investment. These contributed to the possibility of Mansarovar conducting a formal field delivery to Ecopetrol S.A. on November 4, 2021.

Training workshops were held on local labor, Decree 1668 of 2016, residence certificates and the Public Employment Service jointly with the Ministry of Labor and the Special Administrative Unit of the Public Employment Service (UAESPE for its Spanish acronym). More than 800 people participated in these workshops.

There was an early closure of the Social Management unit of Block PUT13 and its exploratory activities. Informative meetings were held with communities and institutions in the project's area of influence. Additionally, in

¹⁶ Does not include Social investments by ISA

¹⁷ The cumulative investment up to the fourth quarter of 2021 is divided into: i) strategic investment of COP \$417,340 million, and ii) mandatory investment of COP \$51,821 million. The execution in 2021 of the Works in lieu of Taxes projects is included in the strategic value, which in 2021 corresponds to COP \$115,467 million for Ecopetrol S.A. and COP \$24,909 million for affiliates. Ecopetrol S.A.: cumulative social and relationship investment totals COP \$336,084 million, sponsorships COP \$157 million and cumulative environmental investment: COP \$35,378 million. Affiliates: cumulative socio-environmental investment: COP \$97,542 million.

the area of influence of the Sirirí block exploratory projects, follow-up and monitoring were carried out before, during and after the X Congress of the U'wa People on the election of the new Asou'wa leader ("*Cabildo Mayor*") on November 26, 2021.

During 4Q21, the environment plan on the viability of the Kale and Platero PPIs was completed, having held more than 400 meetings with strategic actors at the local, regional and national levels, which improved the public perception of Unconventional Reservoirs in Colombia and offered communities greater information to provide them a better understanding so they may generate their own opinions.

Based on the negotiations and the rapprochements carried out, the consultation was finalized with the Iwiwi and Domo Planas reserves for the drilling of the Provenza 1 well of the CPO-08 exploratory block in the municipality of Puerto Gaitán, Meta, in compliance with all management measures agreed upon during the consultation process and strengthening our relationship with said ethnic communities. The former was coordinated by the National Prior Consultation Authority, which convened and led the various worktables.

In 4Q21, Ecopetrol won the SDG 5 Gender Equity category of the 2021 award "*Premios Experiencias Significativas en Gestión Ambiental y Social*" (Significant Experiences in Environmental and Social Management) awarded by the Ministry of Mines and Energy, the National Hydrocarbons Agency and the National Mining Agency, for sponsoring the inclusion of women through the "*Ella es Astronauta*" (She is an Astronaut) program that encourages girls' interest in science.

Corporate Responsibility

At year end, Ecopetrol received the results of the Dow Jones Sustainability Index (DJSI), in which it obtained a global rating of 68 points, allowing it to enter the MILA Index and the S&P Global Annual Sustainability Yearbook. On its end, ISA obtained 83 points in the DJSI's public electricity services category in emerging markets.

Ecopetrol approved and published its Human Rights Risk Management Cycle Guidebook, a document that provides guidelines on human rights due diligence and the identification of associated risks at the Ecopetrol Group level.

Ecopetrol's 2040 Strategy strengthens the TESG pillar, while the Company continues to move forward in the implementation of the material elements roadmaps, which include climate change, comprehensive water management, local development, biodiversity, quality of fuels and air, circular economy, among others.

In December 2021, the stakeholder perception survey was completed, collecting valuable information to advise and adjust elements in the social, environmental and governance dimensions to determine the materiality of Ecopetrol.

Corporate Governance

On the Corporate Governance front, we highlight three milestones that occurred by the end of 2021: i) Ecopetrol's commitment to the 30% Club (Colombia chapter), which promotes greater participation of women on Boards of Directors and management positions in the business sector. This commitment will be accomplished gradually through specific training and meritocracy plans. In 2021, the participation share of women in the Boards of Directors of the Ecopetrol Group increased from 18% to 22%; ii) The update of the Boards of Directors Guidelines of the Ecopetrol Group that include key aspects such as the appointment of members, the compensation of directors and the assessments of the Boards of Directors; and, iii) Given the energy transition strategy, key elements of Corporate Governance were updated, such as Ecopetrol's role as a strategic investor. This update is ongoing, as the new 2040 Strategy entails defining a new management model focused on various business lines.

On its end, ISA and its subsidiaries received the "*Sello de Equidad Laboral Equipares*" (Equipares Labor Equity Seal), silver level, for their strong commitment to implementing the Gender Equality Management System. This award is granted by the Ministry of Labor together with the United Nations Development Program in Colombia (UNDP), and highlights its 32.7% total business average female participation versus the 29% industry average.

Technology

In 4Q21, significant progress was made in the Science, Technology and Innovation (CT+I for its Spanish acronym) strategy and the goals of the CT+I strategy to 2040 was defined; seeking to be strategic orchestrators of cutting-edge knowledge ecosystems at national and global level, with technology and innovation as catalysts for TSEG strategy and the challenges posed by the energy transition.

Regarding digital reinvention, during 2021, benefits were captured of USD \$93.3 million of the USD \$68.3 million planned, representing a compliance rate of 136.6%. In four projects within the Digital Agenda, a return on investment has been generated in less than two years: in the Digital Investment project, certified benefits of USD \$8.9 million were achieved over an investment of USD \$4.6 million; in the Petrotechnical Database benefits of USD \$21.7 million were achieved over an investment USD \$5.6 million; in Gross Refining Margin, the certified benefits were of USD \$31.2 million over an investment of USD \$16.2 million; and Integrated Fields attained benefits of USD \$29.7 million over an investment of USD \$25.3 million, confirming the results anticipated for the Digital Agenda strategy.

Likewise, during 2021, 86 digital products were implemented and delivered to the segments with a performance indicator above 94.5% and a CAPEX execution of 104%. This same year, the wave two approach was established, which comprises 14 strategic programs with benefits estimated at USD \$600 million that ratify the Digital Transformation promise of USD \$1 billion over five years.

Among the most relevant milestones, the following stand out:

- In **Digital Factories**, at the end of 4Q21, 147,481 optimized man-hours were achieved through more than two million successful transactions.
- In **innovation**, in 2021 11 challenges to the national ecosystem were launched, totaling 20 challenges launched; in these, more than 320 entrepreneurs have participated and approximately 95 jobs have been generated. At the end of 4Q21, nine challenges have been successfully finalized and are in the assessment phase for escalation.
- In **cybersecurity and cyberdefense**, the integrated digital identity at the Ecopetrol Group level was activated, with the monitoring of 950 privileged user accounts, far exceeding the goal set of 432 accounts. The Risk-Based Quantitative Approach model is applied to the strategy and pillars of the 2022-2024 Cybersecurity program, prioritizing initiatives and actions to reduce the projected cyber risk.
- Regarding the **continuity of operations**, in 4Q21, a 13-week pilot for the return to in-person work at the office level was resumed, achieving very positive results including the target of 4.5 in satisfaction and an NPS of 52.3, far exceeding the target of 40. Additionally, progress has been made on the project "Nuevo Normal!."

Research, development and innovation initiatives, led by the Innovation and Technology Center, generated benefits in the order of USD \$254 million in 2021, a compliance of 160% given the annual goal of \$158 million. In terms of intellectual property, 24 patent applications for new technologies were filed in 2021, mainly related to new materials, processes and equipment for production wastewater treatment, and formulations for improved hydrocarbon recovery. During 2021, Ecopetrol was granted eight invention patents; five of these were granted in Colombia, one in Brazil, one in Argentina and one in Mexico. In addition, for the year, three industrial secrets were declared, corresponding to a methodology, a formulation and a data base.

IV. Results presentation

Ecopetrol's management will host two conference calls to review the 2021 fourth-quarter and year end results:

Spanish

March 2, 2022
08:00 a.m. Colombia
08:00 a.m. New York

English

March 2, 2022
10:00 a.m. Colombia
10:00 a.m. New York

The webcasts can be accessed through the following links:

Spanish: <https://onlinexperiences.com/scripts/Server.nxp?LASCmd=AI:4;F:QS!10100&ShowUUID=7B8E007C-B3F7-4B44-BC9C-94AA27FF1B84&LangLocaleID=1034>

English: <https://onlinexperiences.com/scripts/Server.nxp?LASCmd=AI:4;F:QS!10100&ShowUUID=04C13212-39F4-4E2E-A14B-4D13E40CBECA&LangLocaleID=1033>

There will be a Q&A session following the presentation. To pose a question, please access through the phone lines specified in the following link: <http://web.meetme.net/r.aspx?p=12&a=UCtVncJogifkSS>

Please check if your browser allows the normal operation of the online presentation. We recommend using the latest versions of Internet Explorer, Google Chrome and Mozilla Firefox.

The results report, the presentation, the webcast and the replay of the conference will be available on the Ecopetrol website: www.ecopetrol.com.co

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Ecopetrol Group Appendices

Table 1: Income Statement - Ecopetrol Group

Billion (COP)	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Revenue						
Local	15,637	6,992	123.6%	45,671	24,688	85.0%
Export	16,124	7,198	124.0%	46,073	25,339	81.8%
Total revenue	31,761	14,190	123.8%	91,744	50,027	83.4%
Cost of sales						
Depreciation, amortization and depletion	2,404	2,300	4.5%	9,599	8,985	6.8%
Variable depreciation, amortization and depletion	1,372	1,595	(14.0%)	6,328	6,055	4.5%
Fixed cost depreciation	1,032	705	46.4%	3,271	2,930	11.6%
Variable costs	12,685	5,536	129.1%	34,678	19,840	74.8%
Imported products	5,679	2,103	170.0%	16,944	7,592	123.2%
Local purchases	5,089	2,246	126.6%	16,438	7,677	114.1%
Hydrocarbon transportation services	253	225	12.4%	918	875	4.9%
Inventories and others	1,664	962	73.0%	378	3,696	(89.8%)
Fixed costs	4,043	2,471	63.6%	11,305	8,728	29.5%
Contracted services	1,647	748	120.2%	4,042	2,744	47.3%
Maintenance	900	719	25.2%	2,638	2,257	16.9%
Labor costs	796	561	41.9%	2,597	2,300	12.9%
Other	700	443	58.0%	2,028	1,427	42.1%
Total cost of sales	19,132	10,307	85.6%	55,582	37,553	48.0%
Gross income	12,629	3,883	225.2%	36,162	12,474	189.9%
Operating expenses	2,206	2,459	(10.3%)	6,568	4,841	35.7%
Administration expenses	1,783	2,047	(12.9%)	5,608	4,152	35.1%
Exploration and projects expenses	423	412	2.7%	960	689	39.3%
Operating income	10,423	1,424	632.0%	29,594	7,633	287.7%
Finance result, net	(1,518)	(260)	483.8%	(3,698)	(2,481)	49.1%
Foreign exchange, net	(21)	445	(104.7%)	330	347	(4.9%)
Interest, net	(1,092)	(556)	96.4%	(2,829)	(2,085)	35.7%
Financial income/loss	(405)	(149)	171.8%	(1,199)	(743)	61.4%
Share of profit of companies	201	(4)	(5,125.0%)	426	88	384.1%
Income before income tax	9,106	1,160	685.0%	26,322	5,240	402.3%
Income tax	(2,099)	(659)	218.5%	(7,598)	(1,868)	306.7%
Net income consolidated	7,007	501	1,298.6%	18,724	3,372	455.3%
Non-controlling interest	(930)	(241)	285.9%	(2,031)	(1,154)	76.0%
Net income attributable to owners of Ecopetrol before impairment	6,077	260	2,237.3%	16,693	2,218	652.6%
(Expense) recovery for impairment long-term assets	(35)	605	(105.8%)	(33)	(621)	(94.7%)
Deferred tax of impairment	35	(190)	(118.4%)	35	91	(61.5%)
Net income attributable to owners of Ecopetrol	6,077	675	800.3%	16,695	1,688	889.0%
EBITDA	13,981	4,334	222.6%	41,967	16,840	149.2%
EBITDA margin	44.0%	30.5%	13.5%	45.7%	33.7%	12.0%

Table 2: Statement of Financial Position - Ecopetrol Group

Billion (COP)	December 31, 2021	September 30, 2021	Δ (%)
Current assets			
Cash and cash equivalents	14,550	10,087	44.2%
Trade and other receivables	18,449	16,849	9.5%
Inventories	8,398	9,078	(7.5%)
Current tax assets	6,274	6,598	(4.9%)
Other financial assets	1,627	1,835	(11.3%)
Other assets	2,333	2,494	(6.5%)
	51,631	46,941	10.0%
Non-current assets held for sale	65	75	(13.3%)
Total current assets	51,696	47,016	10.0%
Non-current assets			
Investments in associates and joint ventures	8,357	8,133	2.8%
Trade and other receivables	24,160	23,562	2.5%
Property, plant and equipment	90,115	83,087	8.5%
Natural and environmental resources	35,910	33,414	7.5%
Assets by right of use	497	339	46.6%
Intangibles	14,961	10,377	44.2%
Deferred tax assets	11,731	12,988	(9.7%)
Other financial assets	1,308	1,232	6.2%
Goodwill and Other assets	5,515	21,086	(73.8%)
Total non-current assets	192,554	194,218	(0.9%)
Total assets	244,250	241,234	1.3%
Current liabilities			
Loans and borrowings	9,206	8,654	6.4%
Trade and other payables	13,568	12,670	7.1%
Provision for employees benefits	2,296	2,179	5.4%
Current tax liabilities	2,152	1,641	31.1%
Accrued liabilities and provisions	1,590	1,316	20.8%
Other liabilities	1,410	1,387	1.7%
Liabilities related to non-current assets held for sale	27	34	(20.6%)
Total current liabilities	30,249	27,881	8.5%
Non-current liabilities			
Loans and borrowings	85,855	83,225	3.2%
Trade and other payables	71	258	(72.5%)
Provision for employees benefits	9,083	12,102	(24.9%)
Non-current taxes	10,780	10,015	7.6%
Accrued liabilities and provisions	12,642	12,044	5.0%
Other liabilities	1,818	1,921	(5.4%)
Total non-current liabilities	120,249	119,565	0.6%
Total liabilities	150,498	147,446	2.1%
Equity			
Equity attributable to owners of the company	71,733	62,995	13.9%
Non-controlling interests	22,019	30,793	(28.5%)
Total equity	93,752	93,788	(0.0%)
Total liabilities and equity	244,250	241,234	1.3%

Table 3: Cash Flow Statement - Ecopetrol Group

Billion (COP)	4Q 2021	4Q 2020	12M 2021	12M 2020
Cash flow provided by operating activities				
Net income attributable to owners of Ecopetrol S.A.	6,077	675	16,695	1,688
Adjustments to reconcile net income to cash provided by operating activities				
Non-controlling interests	930	241	2,031	1,154
Income tax	2,064	849	7,563	1,777
Depreciation, depletion and amortization	2,776	2,492	10,160	9,310
Foreign exchange (gain) loss	21	(445)	32	(347)
Gain on other comprehensive Income realized	0	0	(362)	0
Finance costs recognized in profit or loss	1,573	818	4,139	3,257
Dry wells	136	284	486	448
Loss (gain) on disposal of non-current assets	7	229	62	246
Impairment of current and non-current assets	100	(556)	117	655
Fair value (gain) on financial assets valuation	(46)	(4)	(7)	(44)
Gain on financial derivatives	20	36	19	0
Profit on bussiness combinations	0	1	0	(1,436)
Gain on assets for sale	3	(3)	(4)	(6)
(Gain) loss on share of profit of associates and joint ventures	(201)	4	(426)	(88)
Exchange difference on export hedges and ineffectiveness	132	78	387	390
Others minor items	16	(4)	24	11
Net changes in operating assets and liabilities	(1,344)	1,568	(12,677)	(2,371)
Income tax paid	(1,261)	(927)	(5,703)	(5,457)
Cash provided by operating activities	11,003	5,336	22,536	9,187
Cash flows from investing activities				
Investment in joint ventures	308	0	291	0
Acquisition of subsidiaries, net of cash acquired	0	0	(9,323)	0
Investment in property, plant and equipment	(2,135)	(1,713)	(6,118)	(5,032)
Investment in natural and environmental resources	(2,171)	(1,445)	(6,733)	(5,994)
Payments for intangibles	(237)	(50)	(444)	(90)
(Purchases) sales of other financial assets	163	877	1,318	2,108
Interest received	136	42	266	299
Dividends received	111	76	206	157
Proceeds from sales of assets	11	9	19	23
Net cash used in investing activities	(3,814)	(2,204)	(20,518)	(8,529)
Cash flows from financing activities				
Proceeds (repayment of) from borrowings	(92)	(1,067)	13,399	8,802
Interest paid	(1,514)	(748)	(3,334)	(2,346)
Lease Payments	(105)	(105)	(336)	(351)
Dividends paid	(1,347)	(3,487)	(2,771)	(8,734)
Net cash used in financing activities	(3,058)	(5,407)	6,958	(2,629)
Exchange difference in cash and cash equivalents	332	(472)	492	(23)
Net (decrease) increase in cash and cash equivalents	4,463	(2,747)	9,468	(1,994)
Cash and cash equivalents at the beginning of the period	10,087	7,829	5,082	7,076
Cash and cash equivalents at the end of the period	14,550	5,082	14,550	5,082

Table 4: EBITDA Reconciliation - Ecopetrol Group

Billion (COP)	4Q 2021	4Q 2020	12M 2021	12M 2020
Net income attributable to the owners of Ecopetrol	6,077	675	16,695	1,688
(+) Depreciation, amortization and depletion	2,776	2,492	10,160	9,310
(+/-) Impairment of long-term assets	35	(605)	33	621
(+/-) Gain in bussiness combinations	0	1	0	(1,436)
(+/-) Financial result, net	1,518	260	3,698	2,481
(+) Income tax	2,064	849	7,563	1,777
(+) Taxes and others	581	421	1,787	1,245
(+/-) Non-controlling interest	930	241	2,031	1,154
Consolidated EBITDA	13,981	4,334	41,967	16,840

Table 5: Reconciliation of EBITDA by Segment (1Q21)

Billion (COP)	Upstream	Downstream	Midstream	Energy	Eliminations	Consolidated
Net income attributable to the owners of Ecopetrol	4,228	98	1,478	273	0	6,077
(+) Depreciation, amortization and depletion	1,659	429	311	377	0	2,776
(+/-) Impairment of long-term assets	(438)	309	164	0	0	35
(+/-) Gain in business combinations	0	0	0	0	0	0
(+/-) Financial result, net	621	395	(59)	546	15	1,518
(+) Income tax	1,520	(406)	827	122	1	2,064
(+) Other taxes	171	311	53	46	0	581
(+/-) Non-controlling interest	(24)	37	296	621	0	930
Consolidated EBITDA	7,737	1,173	3,070	1,985	16	13,981

Ecopetrol S.A. Appendices

Following are the Income Statements and Statements of Financial Situation of Ecopetrol S.A.

Table 6: Income Statement

Billion (COP)	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Local	13,491	6,800	98.4%	43,041	23,943	79.8%
Exports	12,362	5,563	122.2%	35,147	19,586	79.4%
Total revenue	25,853	12,363	109.1%	78,188	43,529	79.6%
Variable costs	15,228	7,944	91.7%	44,365	28,886	53.6%
Fixed costs	3,333	3,074	8.4%	11,797	11,456	3.0%
Total cost of sales	18,561	11,018	68.5%	56,162	40,342	39.2%
Gross income	7,292	1,345	442.2%	22,026	3,187	591.1%
Operating expenses	1,688	1,821	(7.3%)	4,193	2,841	47.6%
Operating income	5,604	(476)	(1,277.3%)	17,833	346	5,054.0%
Financial income/loss	(1,010)	300	(436.7%)	(3,607)	(3,021)	19.4%
Share of profit of companies	2,685	827	224.7%	6,627	3,905	69.7%
Income before income tax	7,279	651	1,018.1%	20,853	1,230	1,595.4%
Income tax	(1,149)	(6)	19,050.0%	(4,105)	760	(640.1%)
Net income attributable to owners of Ecopetrol	6,130	645	850.4%	16,748	1,990	741.6%
Impairment	(82)	43	(290.7%)	(82)	(425)	(80.7%)
Deferred tax of impairment	29	(13)	(323.1%)	29	123	(76.4%)
Net income attributable to owners of Ecopetrol	6,077	675	800.3%	16,695	1,688	889.0%
EBITDA	7,531	1,626	363.2%	25,417	6,066	319.0%
EBITDA margin	29.1%	13.20%	15.9%	32.50%	13.90%	18.6%

Table 7: Statement of Financial Position / Balance Sheet

Billion (COP)	December 31, 2021	September 30, 2021	Δ (%)
Current assets			
Cash and cash equivalents	5,937	1,661	257.4%
Trade and other receivables	15,546	13,786	12.8%
Inventories	5,600	5,800	(3.4%)
Current tax assets	5,462	5,439	0.4%
Other financial assets	1,177	2,601	(54.7%)
Other assets	1,397	1,351	3.4%
	35,119	30,638	14.6%
Non-current assets held for sale	42	47	(10.6%)
Total current assets	35,161	30,685	14.6%
Non-current assets			
Investments in associates and joint ventures	77,227	73,028	5.7%
Trade and other receivables	564	546	3.3%
Property, plant and equipment	24,609	23,886	3.0%
Natural and environmental resources	23,667	22,333	6.0%
Assets by right of use	2,963	3,028	(2.1%)
Intangibles	268	239	12.1%
Deferred tax assets	5,485	5,089	7.8%
Other financial assets	630	648	(2.8%)
Goodwill and other assets	1,029	1,197	(14.0%)
Total non-current assets	136,442	129,994	5.0%
Total assets	171,603	160,679	6.8%
Current liabilities			
Loans and borrowings	4,421	3,762	17.5%
Trade and other payables	10,744	8,815	21.9%
Provision for employees benefits	2,048	1,938	5.7%
Current tax liabilities	691	409	68.9%
Accrued liabilities and provisions	1,213	805	50.7%
Other liabilities	891	1,073	(17.0%)
Total current liabilities	20,008	16,802	19.1%
Non-current liabilities			
Loans and borrowings	61,286	59,789	2.5%
Provision for employees benefits	8,282	11,225	(26.2%)
Non-current tax liabilities	281	356	(21.1%)
Accrued liabilities and provisions	9,959	9,460	5.3%
Other liabilities	54	52	3.8%
Total non-current liabilities	79,862	80,882	(1.3%)
Total liabilities	99,870	97,684	2.2%
Equity			
Equity attributable to owners of the company	71,733	62,995	13.9%
Total equity	71,733	62,995	13.9%
Total liabilities and equity	171,603	160,679	6.8%

Table 8: Export Destinations - Ecopetrol Group

Crudes - mboed	4Q 2021	4Q 2020	% Share	12M 2021	12M 2020	% Share
U.S. Gulf Coast	160.6	127.1	34.9%	131.6	172.2	35.0%
Asia	260.0	243.2	56.5%	213.6	205.7	56.8%
Central America / Caribbean	5.4	5.2	1.2%	6.4	14.8	1.7%
Others	7.5	7.3	1.6%	4.4	4.1	1.2%
Europe	16.7	18.8	3.6%	12.7	12.8	3.4%
U.S. West Coast	8.4	0.0	1.8%	6.1	4.7	1.6%
South America	1.7	0.0	0.4%	1.1	0.0	0.3%
U.S. East Coast	0.0	0.0	0.0%	0.0	4.2	0.0%
Total	460.3	401.6	100.0%	375.8	418.5	100.0%

Products - mboed	4Q 2021	4Q 2020	% Share	12M 2021	12M 2020	% Share
Central America / Caribbean	24.0	28.5	26.8%	34.7	39.7	35.4%
U.S. Gulf Coast	18.0	29.2	20.1%	16.1	21.6	16.5%
Asia	21.6	12.5	24.1%	16.3	12.3	16.6%
South America	7.8	9.8	8.7%	9.9	11.9	10.1%
U.S. East Coast	14.3	29.1	16.0%	16.6	19.4	16.9%
Europe	0.0	5.5	0.0%	2.8	4.0	2.9%
U.S. West Coast	0.0	0.0	0.0%	0.0	0.8	0.0%
Others	3.8	0.0	4.2%	1.6	0.0	1.6%
Total	89.5	114.6	100.0%	98.0	109.7	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 9: Local Purchases and Imports - Ecopetrol Group

Local Purchases - mboed	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Crude Oil	200.9	185.1	8.5%	189.0	177.8	6.3%
Gas	1.4	2.1	(33.3%)	2.0	2.9	(31.0%)
Products	2.9	2.7	7.4%	2.8	2.6	7.7%
Diluent	0.0	0.1	(100.0%)	0.0	0.3	(100.0%)
Total	205.2	190.0	8.0%	193.8	183.6	5.6%

Imports - mboed	4Q 2021	4Q 2020	Δ (%)	12M 2021	12M 2020	Δ (%)
Crude Oil	20.7	24.9	(16.9%)	24.5	15.3	60.1%
Products	117.5	68.4	71.8%	91.4	62.1	47.2%
Diluent	33.6	30.5	10.2%	27.9	35.0	(20.3%)
Total	171.8	123.8	38.8%	143.8	112.4	27.9%

Total	377.0	313.8	20.1%	337.6	296.0	14.1%
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Table 10: Exploratory Wells Detail - Ecopetrol Group

#	Quarter	Name	Initial Well Classification (Lahee)	Block	Basin	Operator/Partner	Status	TD Date
1	First	Boranda Sur-1	A1	Boranda	Middle Magdalena	Parex 50% (Operator)ECP 50%	Dry	January 11/2021
2	First	Moyote-1	A3	R02-L01-A6 CS	Sureste	Petronas 50% (Operator) ECP MEXICO 50%	Dry	January 27/2021
3	First	EST-SN-8	Stratigraphic	SN-8	Sinú - San Jacinto	Hocol (100%)	Plugged and Abandoned	February 27/2021
4	First	Boranda Sur-2	A1	Boranda	Middle Magdalena	Parex 50% (Operator)ECP 50%	Successful	February 11/2021
5	First	Liria YW 12	A2C	Recetor	Piedemonte Llanero	ECP 100%	Successful	March 7/2021
6	Second	Boranda Centro-1	A1	Boranda	Middle Magdalena	Parex 50% (Operator)ECP 50%	Dry	April 04/2021
7	Second	Chimuelo-1	A2C	Tisquirama	Middle Magdalena	ECP 100%	Dry	May 8/2021
8	Second	Flamencos-3	A1	VMM	Middle Magdalena	ECP 100%	Successful	June 16/2021
9	Third	Basari-1	A3	RC-7	Sinú - San Jacinto	HOCOL (100%)	Under Evaluation	July 17 / 21
10	Third	Silverback 2	A3	Mississippi Canyon 35	US GOM	Chevron 35%, Shell 30%, Progress 15%, Murphy 10%, EAL 10%	Dry	August 25 /21
11	Fourth	Carnaval-1	A3	Perdices	Sinú San Jacinto	Lewis 50 %-Operator, Hocol 50 %	Under Evaluation	October 1/2021
12	Fourth	Cira 3540	A2b	Convenio de Explotación La Cira	Middle Magdalena	ECP (48%) Sierracol Energy Operator (52%)	Under Evaluation	November 17/2021
13	Fourth	Ibamaca-1	A3	Tolima	Valle Superior del Magdalena	HOCOL 100%	Under Evaluation	Diciembre 8/2021
1*	Third	Perla Negra-1	A3	Fortuna	Middle Magdalena	Parex 95% (Operator) Ecp 5% Sólo Riesgo	Dry	August 18/2021
2*	Third	Perla Negra-1 ML 1	A3	Fortuna	Middle Magdalena	Parex 95% (Operator) Ecp 5% Sólo Riesgo	Under Evaluation	September 14/2021
3*	Fourth	Cayena -1 ST1 ML1	A1	Fortuna	Middle Magdalena	Parex 95% (Operator) Ecp 5% Sólo Riesgo	Under Evaluation	October 17/2021
4*	Fourth	Cayena-1 ST 1 ML2	A1	Fortuna	Middle Magdalena	Parex 95% (Operator) Ecp 5% Sólo Riesgo	Under Evaluation	November 11/2021

* At year-end 2021, the activity operated at sole risk by partners are included.

Table 11: HSE Performance (Health, Safety and Environment)

HSE Indicators*	4Q 2021	4Q 2020	12M 2021	12M 2020
Frequency of total registrable injuries (No. Recordable cases / Million man hours)	0.22	0.63	0.44	0.50
Environmental incidents**	1	1	7	6

* 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. ** Environmental incidents are those hydrocarbon spills greater than 1 barrel, with environmental impact.