

# INVESTOR DAY



ENERGY THAT TRANSFORMS

# 2040 STRATEGY



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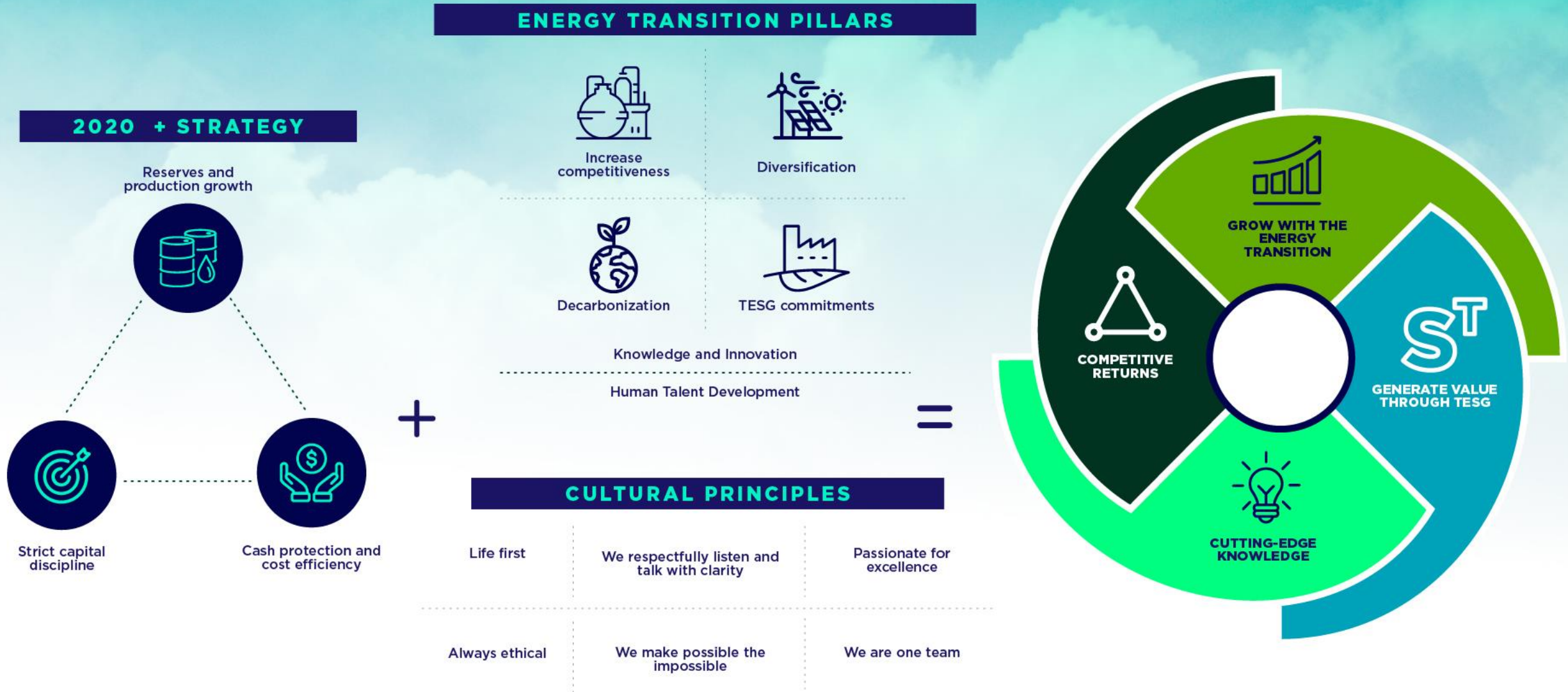
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# THE EVOLUTION OF OUR STRATEGY OVER THE LAST TWO YEARS HAS DEFINED THE NEW ECOPETROL GROUP





# 2040 CORPORATE STRATEGY

## COMPETITIVE RETURNS

**8%-10%** Return on capital (ROACE)

**< 2.5x** Gross debt / EBITDA

**13 - 20 TCOP**  
Annual transfer payments to the Nation \*

## CUTTING-EDGE KNOWLEDGE

**20 - 30 BUS\$**  
(~76 - 114 TCOP)

Cumulative EBITDA by 2040 enabled by technology and innovation

**70%** of personnel in reskilling by 2030 (to face new challenges)

## GROW WITH THE ENERGY TRANSITION

**13,000 - 14,000 MUS\$**  
(~49 - 53 TCOP)

Annual EBITDA by 2040 \*\*

**30%-50%**  
Share of low-emission business in GE EBITDA

## GENERATE VALUE THROUGH TEG

**Zero** CO2 emissions by 2050 (Scopes 1 and 2)  
-50% cutback of total emissions by 2050

**Zero** Water discharges by 2045

**230,000** Non-O&G positions by 2040

Assumptions: Brent (2025- 2040) 45 -55 US\$/Bl. Exchange rate: \$3,800/ cop

\*Includes: Royalties, taxes and dividends \*\*6,500 -8,500 MUS\$ O&G Annual EBITDA by 2040





# GROW WITH THE ENERGY TRANSITION



## O&G

**Maximize the value** of reserves, exploration and production as well as the **competitiveness** of the hydrocarbon business

**Further diversification**  
**into energy** and related business  
aligned with reduction of emissions

# ECOPETROL'S GROWTH IS LEVERED

on our ever more resilient reserves

## Proven reserves evolution (MBOE)



## Average reserve life (years)

Remaining amount of reserves, expressed in time, assuming no new activity

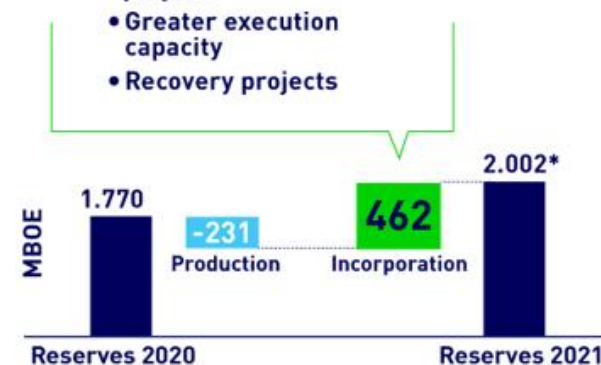


**+282**  
MBOE

- Performance of fields
- Maturity of new projects

**+180**  
MBOE

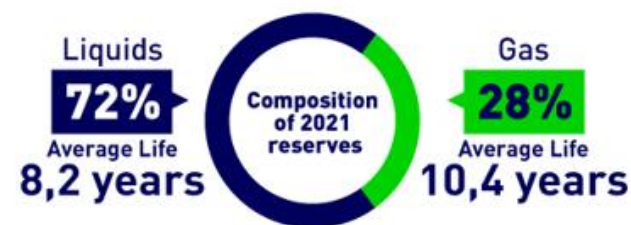
Favorable price effect



## Reserve-Replacement Ratio

The ratio of barrels produced vs. barrels incorporated

**The highest in 12 years**



## Location of reserves

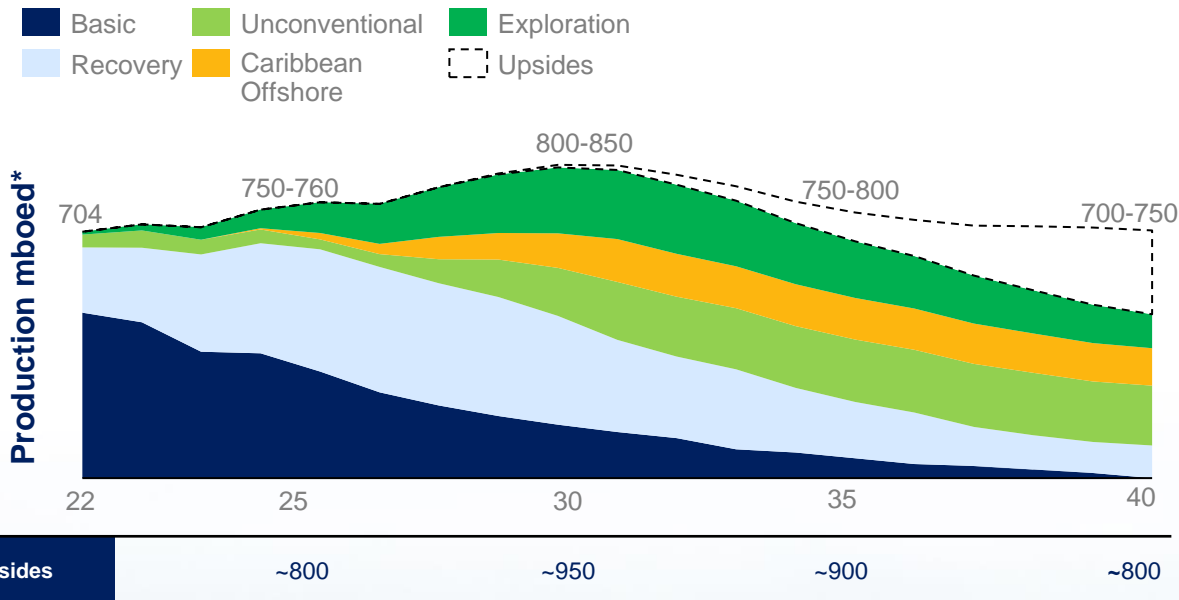


\*Million barrels of oil equivalent

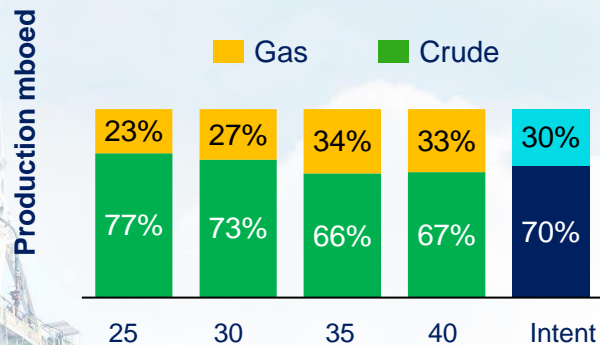
\*Decimals round to the nearest whole number

# HIGHLY COMPETITIVE UPSTREAM BUSINESS

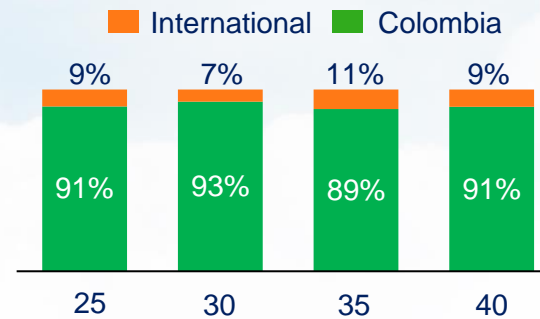
enables production growth and diversification



Production by type of product



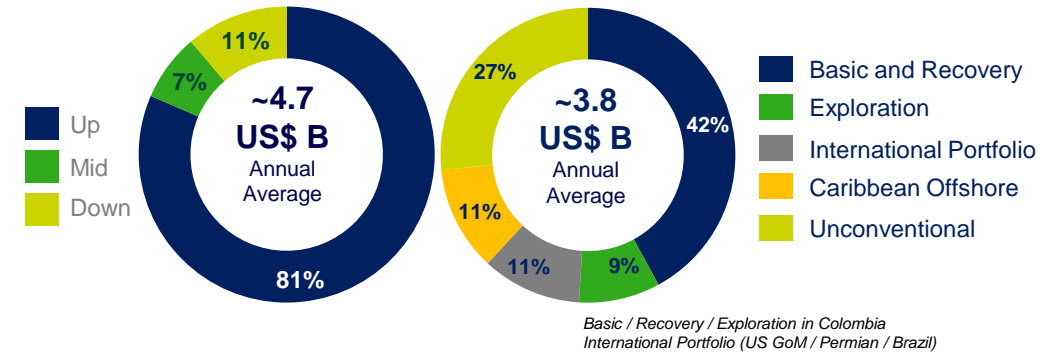
Production by geography



\*Assumptions: Brent 45 -55 USD\$/BI; High prices: 55-65 USD\$/BI

\*\* IIPP: Comprehensive Research Pilot Project

CAPEX 2022-2030



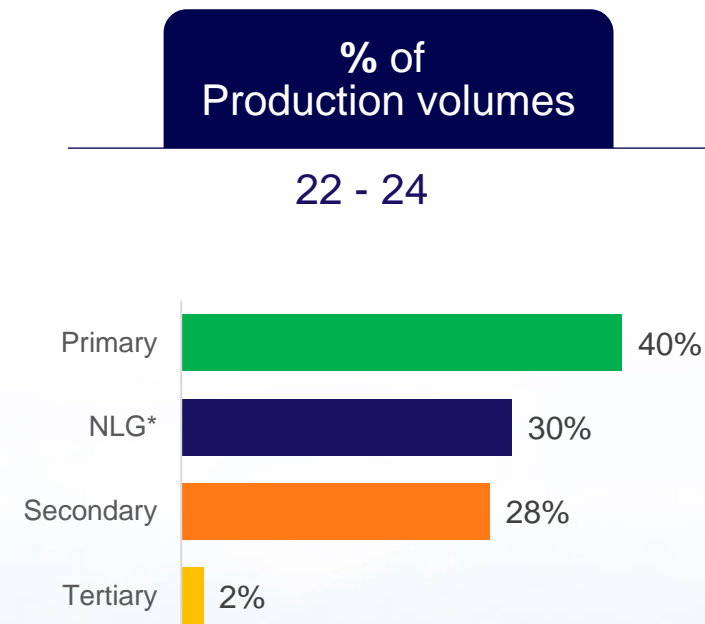
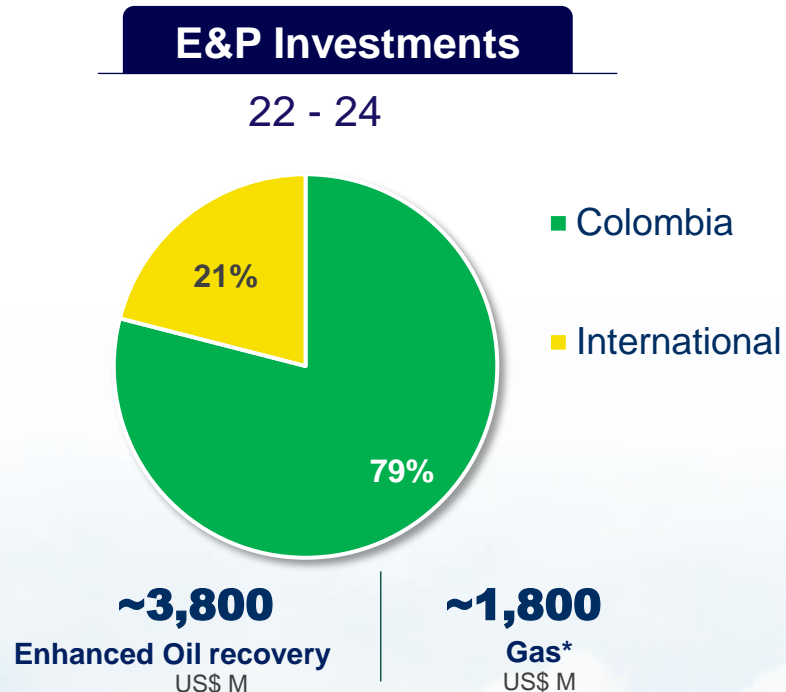
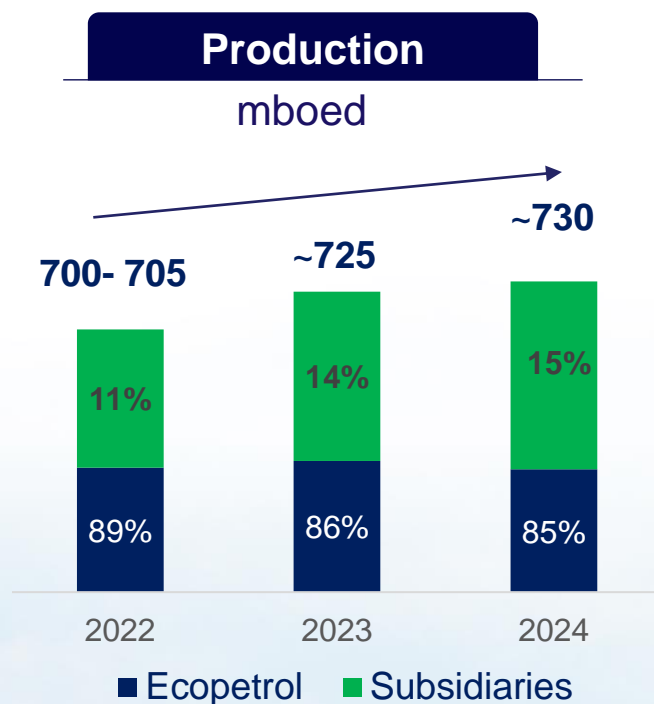
Production

Exploration

Current assets Conventional	<ul style="list-style-type: none"> <li>Greenfield Development</li> <li>Maximize value of recovery program</li> </ul>
Unconventional Colombia	<ul style="list-style-type: none"> <li>Execution of Kalé and Platero IIPPs***</li> <li>Regulatory and community feasibility</li> </ul>
Unconventional International	<ul style="list-style-type: none"> <li>Maximize value of current assets</li> <li>Expand the portfolio</li> </ul>
Caribbean Offshore	<ul style="list-style-type: none"> <li>Make discoveries viable</li> <li>Strengthen the portfolio with new opportunities</li> </ul>
Onshore	<ul style="list-style-type: none"> <li>Make viable the Piedemonte portfolio</li> <li>Accelerate lead maturation</li> </ul>
International	<ul style="list-style-type: none"> <li>Optimize and make viable US GoM projects</li> <li>Develop asset portfolio in Brazil</li> </ul>
New Ventures	<ul style="list-style-type: none"> <li>Complement our portfolio in the long term</li> <li>Capture new opportunities</li> </ul>



# OUR 2022 – 2024 PLAN BOOSTS PRODUCTION and operational excellence



**US\$ M11,000 – 12,000\*\***

**Reserve  
Replacement Ratio**  
MBOE

**+100%**

**Development  
wells**

**+1,800**

**Exploratory  
wells**

**50 - 60**

\*Includes NGL production by secondary recovery. \*\* Organic growth



# SUSTAINED CONTRIBUTION

to our value chain through diversification

22 - 24

PLAN



**~800 - 900**  
**US\$ M**

**Organic Investment**

(2022-2024)



**+4%**

**Multipurpose Pipelines Growth**

(2021 vs 2024)



**~1,000**  
**kbd**

**Transported volume**

(2024)

## Sustainable growth initiatives:

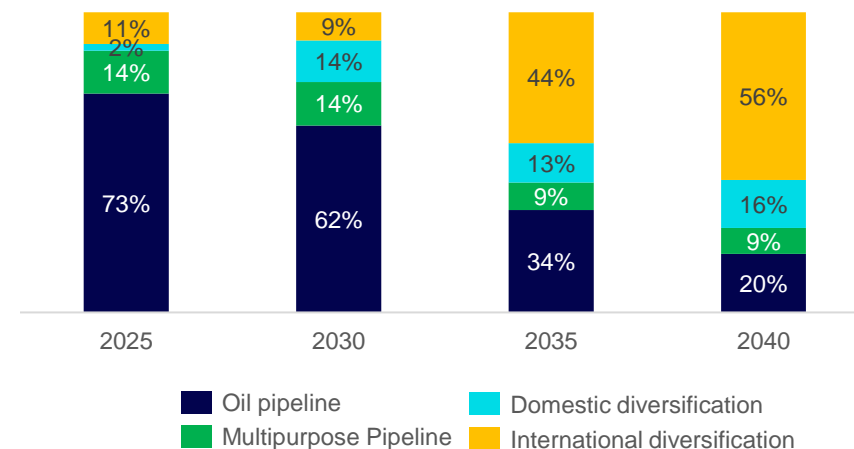
- **Multipurpose pipelines growth:**
  - Increase capacity
  - Operational and strategic storage
  - Supply reliability
- **Diversification**
  - Gas infrastructure
  - Port terminal services: blending, bunkering
  - International expansion
- **Carbon-neutral:** conversion of our energy matrix and pump station decarbonization
- Achieve **efficiencies** through infrastructure digitalizing

2040

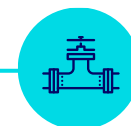
VISION

## Diversification

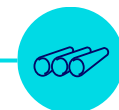
### EBITDA by Business



## Current business competitiveness



**Oil pipelines competitiveness**



**Multipurpose pipelines growth**



**Ports optimization**

# CLEAN AND PROFITABLE PRODUCTS

for an increasing demand

22 - 24

PLAN

## Investment

(2022-2024) US\$ M

**~1,200 – 1,400**

## Refinery throughput

(2024)

**~420 - 430**

(mbd)

## Cartagena Refinery

Throughput capacity  
(mbd)

**150 ▶ 200**

Processing units

**34 ▶ 35**

EBITDA growth

**~40%**

**IPCC\***  
**Operation**  
**start**  
**2Q22**

## Esenttia

**~490 - 530** mton

**Sales volume**

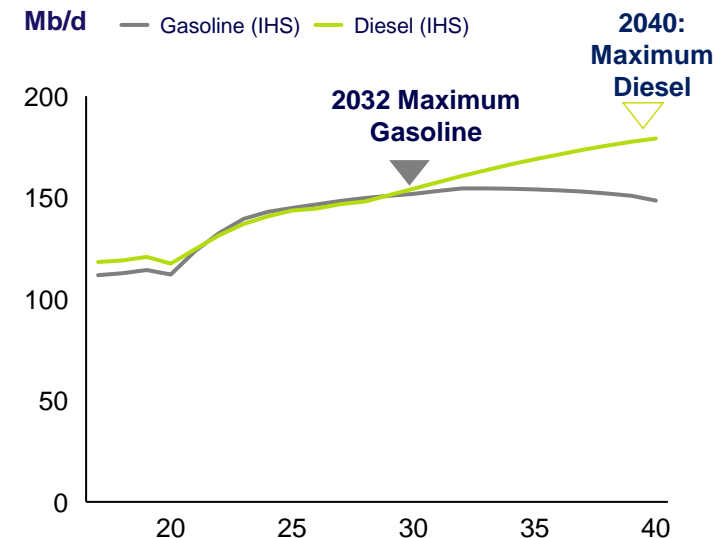
(2022-2024)

Facility expansion 3Q 2022

2040

VISION

## Domestic fuel demand



## Maximize value through our TEGS strategy

- Guarantee the supply of clean fuels
- Renewable energies- solar farms C/gena refinery (23MWp) and B/meja refinery (16-21MWp)
- Reduction of fuel oil and imports in Esenttia
- Potential integration between refining and petrochemicals
- Increase EcoDiesel capacity

## Low carbon businesses

- Blue and green hydrogen
- Biofuels
- Lube base oils



# COMMERCIAL STRATEGY

that maximizes hydrocarbon value

2022 – 2024

PLAN

## Crude and Products

**Diversification** of international sales destinations

Sales of carbon compensated crude & products

Product blending

**Maximize crude purchase from 3<sup>rd</sup> parties** **105- 115**  
mbd

**Trading in Asia** **12 - 15**  
mmbls

**Asset Back Trading (ABT)** **30 - 35**  
mmbls/year

## Gas and LPG

- New gas supply sources
- 3rd party gas trading

**Social gas - New users connected** **50-60 thousand**  
22-24

**Market share** **70%-80%**  
by 2024

**EBITDA** **850-900**  
(US\$ million/year)  
Gas and LPG

2040

VISION

## Maximize business value

- **EBITDA > 4x** vs 2019  
Gas and LPG
- **New sources** Micro-LNG, offshore and unconventional
- **Third party gas trading**  
**10 - 12%**

## Diversification

- **Sale of new renewable products**  
(Hydrogen)
- **Decarbonize commercial operations**

# REGIONAL LEADERSHIP

that supports sustainable growth through 2030+

## Projected CAPEX 2030

(USD\$ B)

**CAPEX pipeline**  
(total opportunities identified)

36

**CAPEX financial plan**  
(committed + potential investments)

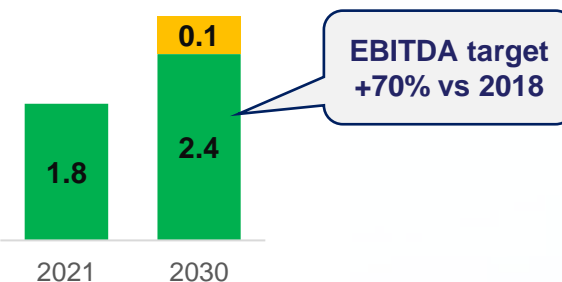
12.5 – 13.5

**CAPEX committed – budget** (projects in execution & brownfield)

7.5

## EBITDA\*

(USD\$ B)

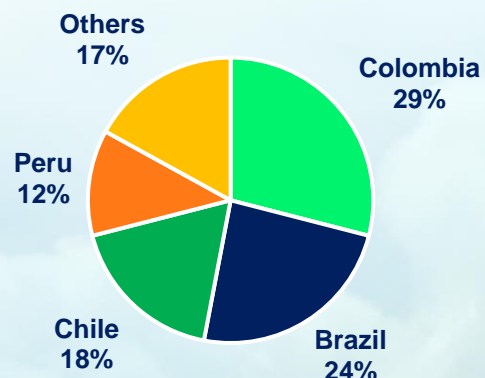
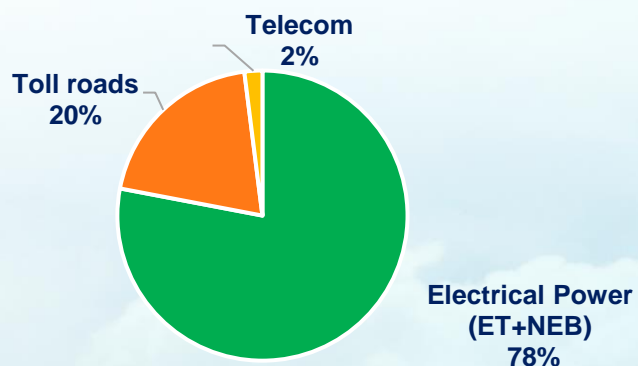


Investments in addition to the strategic goal

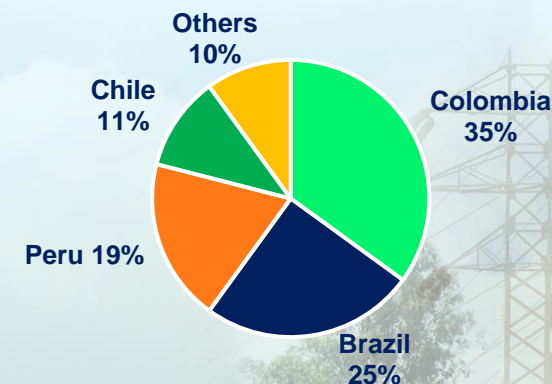
## Main strategic goals

- **Current businesses:**
  - ✓ Investment growth of USD\$ 8.3 B in current businesses/geographies and USD\$ 2.2 B in new geographies (Transmission: USA and PAN; Toll Roads: COL and PER).
  - ✓ Competitiveness, efficiencies and service standards.
- **New businesses:**
  - ✓ Energy transition: investments of USD\$ 2 B in distributed energy services and storage
  - ✓ New business models

## CAPEX 2030 cumulative by business and geography (%)



## EBITDA\* 2030 by geography (%)





# 22-24 PLAN

sustains our profitable growth path

## Committed CAPEX roadmap:

Main investments

2022

- Colombia:**  
 UPME projects  
 El Río,  
 Sabanalarga,  
 Cerromatoso &  
 Smart Valves
- Brazil:**  
 IE Biguacú, IE  
 Itaunas, IE Ivaí,  
 Aimorés,  
 Paraguacú, Tres  
 Lagoas

2023

- Colombia:**  
 UPME projects  
 Cuestecitas &  
 Sogamoso-La  
 Loma
- Brazil:**  
 Minuano, Triangulo  
 Mineiro
- Chile:**  
 Rutas del Loa
- Peru:**  
 Coya-Yana,  
 Chincha-Nazca

2024

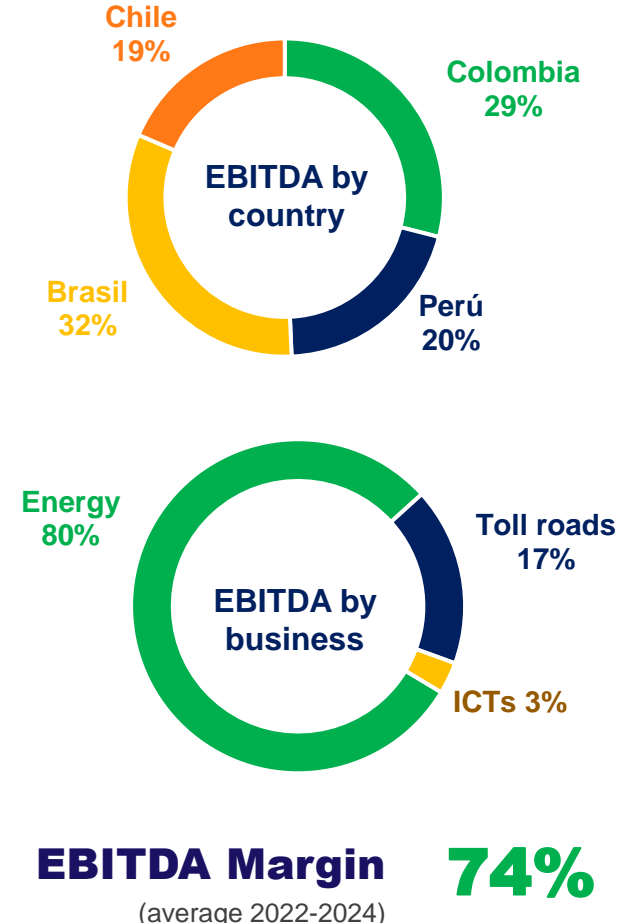
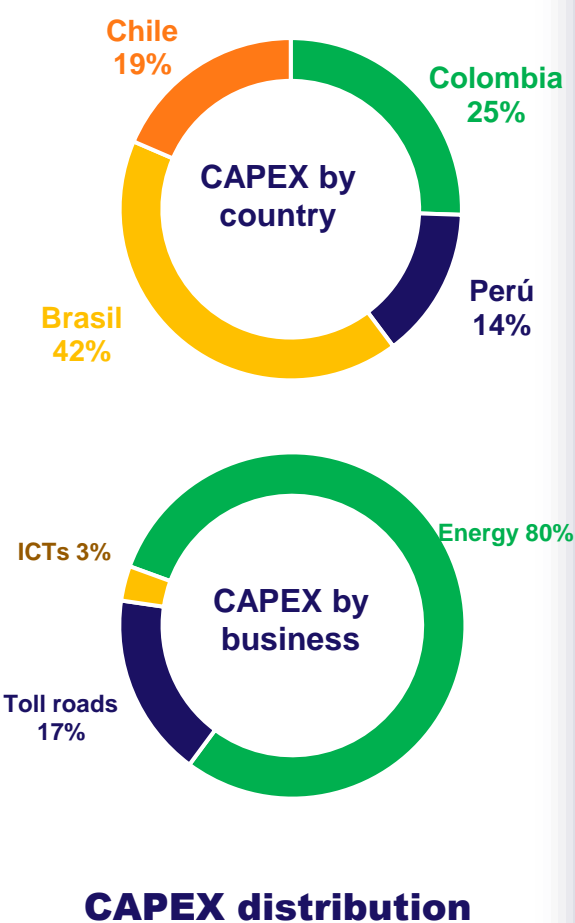
- Brazil:**  
 Riacho Grande  
 (partial,  
 completed  
 2025)

**CAPEX**  
 (2022-2024)  
 US\$ M

~2,600

**Average EBITDA**  
 (2022-2024)  
 US\$ M

~1,800



**Dividend Payout**  
 (ordinary dividend policy)

40%

\*Excludes inorganic growth

# SYNERGIES THAT CREATE VALUE FOR ISA AND THE ECOPETROL GROUP

## Competitive returns



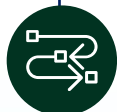
### Optimize procurement costs

- Technology & telecommunications facility maintenance
- Transport & logistics



### Ecopetrol's Electrical infrastructure

- O&M management of existing infrastructure and new connections.
- Self-generation optimization



### Linear infrastructure with CENIT

- Optimize operations
- Infrastructure services

## Cutting- edge knowledge



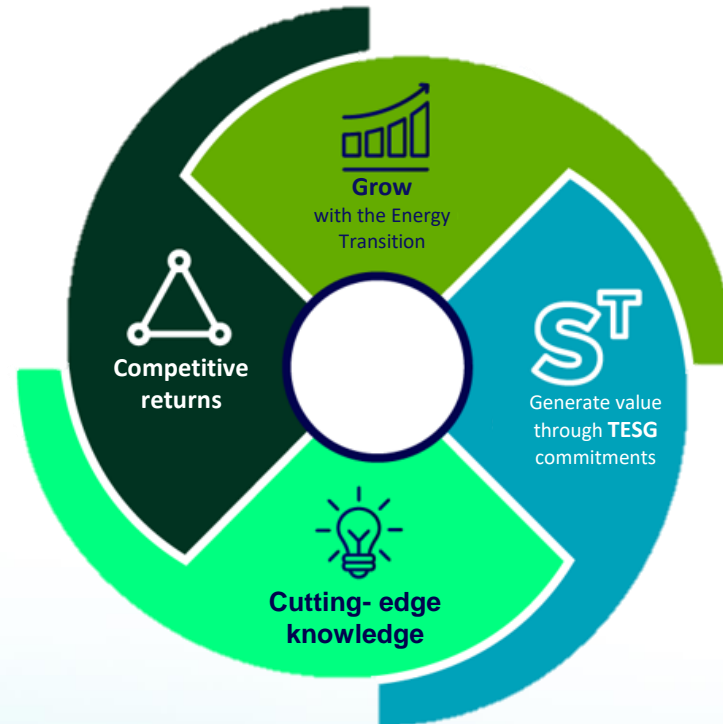
### Science and innovation

- New business development
- Innovation programs synergies



### IT and Cybersecurity

- Develop technology initiatives and IT security



## Grow with the energy transition



### Accelerating new energy businesses and the energy transition

- Green hydrogen
- Renewable generation
- Large-scale storage
- Distributed energy services



### ISA's entry to the US market

## Generate value through TESS

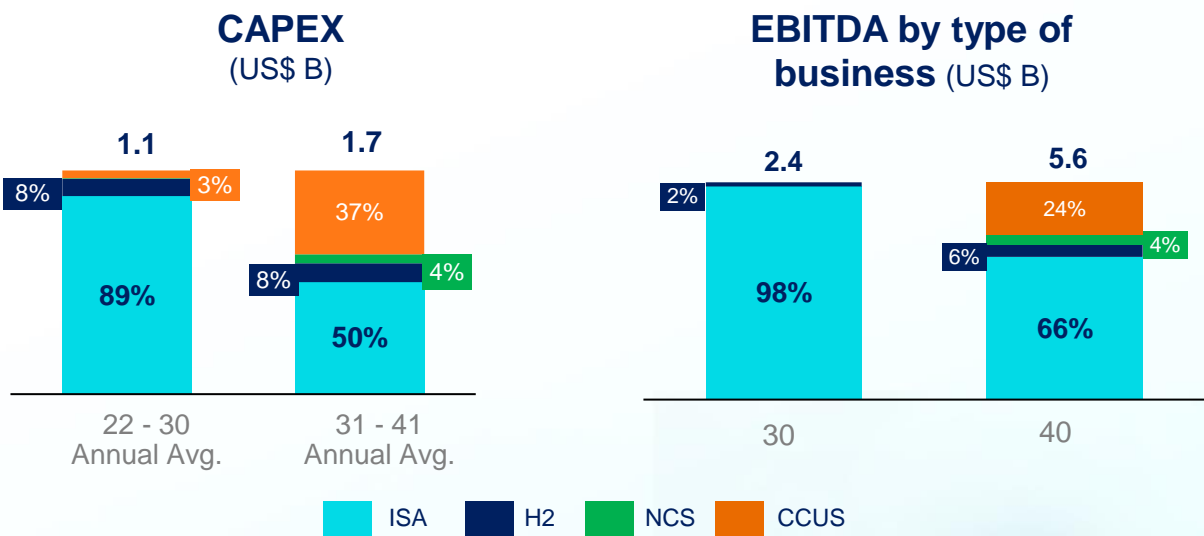


### Environmental and communities' management

- Enhance environmental and social programs and projects through joint knowledge and skills (*Conexión Jaguar*).
- Social inclusion, workers



# LOW-CARBON EMERGING BUSINESS (INDICATIVE)



VISION 2040

## Hydrogen

- H<sub>2</sub> projects for our own operations
- H<sub>2</sub> projects - Low-emission mobility, industrial usage and exports
- Strengthening domestic demand

## Natural Climate Solutions (NCS)

- Carbon credits +2MtCO<sub>2</sub>/year for emission offsets
- Long term alliances: ISA (Comexión Jaguar), TNC, WCS, Fondo Acción, Fundación Natura and South Pole.

## CCUS / CSS

- Assessment of commercial and emerging technologies
- Estimate geological storage potential and enhanced CO<sub>2</sub> recovery
- Launch of pilot projects





# GENERATE VALUE THROUGH TESG

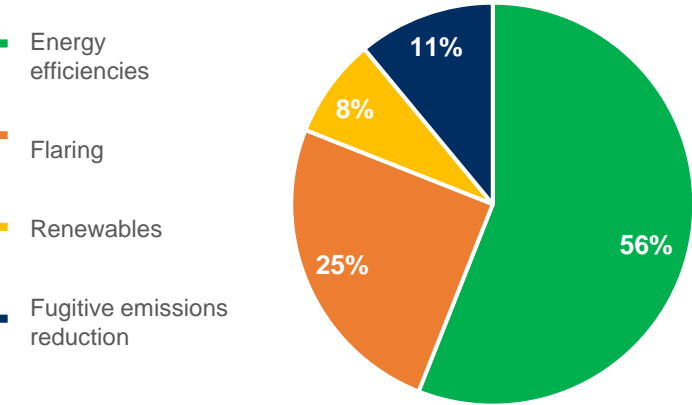


Accelerate and prioritize  
**decarbonization and energy efficiency**

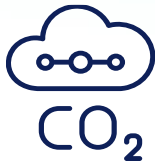
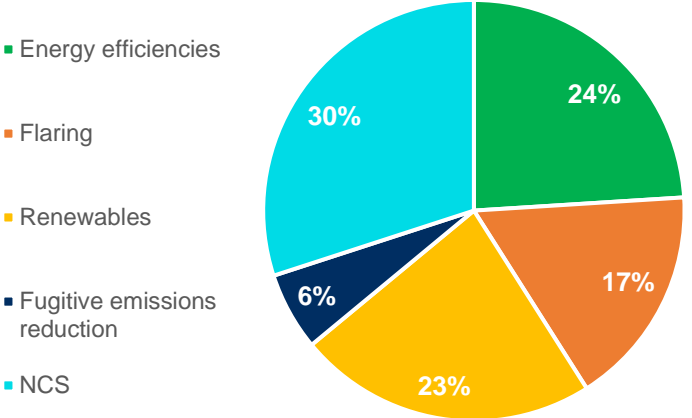
Ethical and transparent governance  
framework to facilitate TESG driven  
growth

# ADVANCING IN OUR DECARBONIZATION GOALS

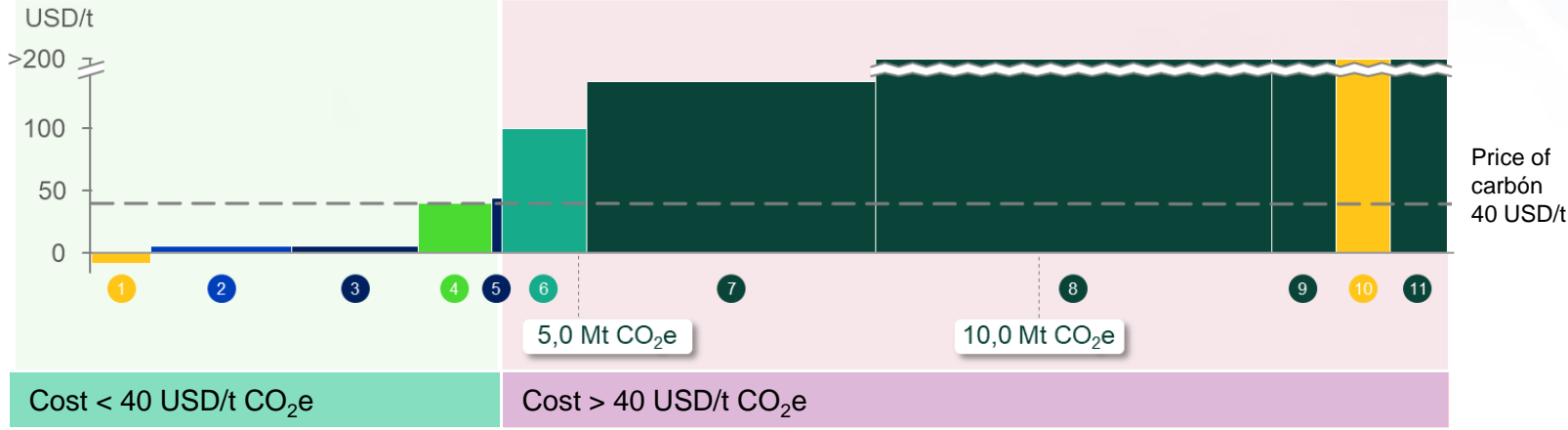
DISTRIBUTION BY TYPE OF INITIATIVE 2025



DISTRIBUTION BY TYPE OF INITIATIVE 2030



Abatement Curve



Prioritized initiatives

1	Solar and wind power	5	Heat recovery form combustion gases	9	CCUS – Cartagena refinery Industrial Service capture & and EOR Venting
2	Fugitive emissions, flaring and venting	6	Green Hydrogen in Cartagena Refinery	10	Solar and wind power with storage
3	Energy efficiency	7	CCUS – Barranca Refinery capture Industrial Service & EOR Venting	11	CCUS – Crude fields at a long distance from EOR
4	Syngas from Biomass	8	CCUS – Crude and gas fields at a low/mid distance from EOR		

By 2030 Ecopetrol can reduce its emissions with competitive solutions below \$40/t CO<sub>2</sub>e (shadow price).



# TESG

## LEVERAGING GROWTH

### ENVIRONMENTAL

#### Water Neutrality:

**Freshwater capture** reduction of  
58% - 66% by 2045

**Zero Water discharge** by 2045  
(2019 baseline)

**Progressive Reduction of**  
waste in final disposals

**Circular Economy** as key lever  
to achieve our TESG goals

#### Biodiversity by 2030

12 million trees  
30,000 hectares conserved  
50 Ecoreserves

### SOCIAL

**More diverse human talent**  
70% direct inclusive recruitment by 2030

#### Zero fatalities

TRIF ~ 0.3 - 2040

**230,000 non-oil related**  
**jobs** created by 2040

**2.4 million people** with  
improved access to drinking  
water by 2040

### CORPORATE GOVERNANCE

**50%** of 2022 variable  
compensation tied to  
TESG targets

High standards of  
corporate governance and  
independence of BoD

- Succession policy and competency matrix for BoD and CEO of Ecopetrol
- BoD status including diversity and gender criteria.
- Company acknowledged by ALAS20, an organization that evaluates sustainability and corporate governance practices.



Technology and innovation at the heart of our TESG commitment



CONTINUOUSLY  
STRENGTHEN OUR  
STRATEGY WITH

# CUTTING-EDGE KNOWLEDGE



**Workforce talent** and a strong operating model support our strategy

**Technology and innovation** as main drivers of our TESS growth



# DEVELOPING COMPETENCIES

FOR A NEW REALITY

## SCIENCE, TECHNOLOGY AND INNOVATION COMPREHENSIVE AGENDA

Strategic  
ecosystem  
orchestrator

**20 - 30**  
US\$ B

EBITDA Cumulative  
impact by 2040

### Priorities

- 1 Decarbonization – CCUS and H<sub>2</sub>
- 2 Optimization of assets
- 3 Circular economy

### Areas that leverage the resilience and diversification of GE

Recovery and Reserves	Zero Diluent	Zero Thefts	Total Autonomy Processes
Carbon negative	Sustainable Petro-chemicals	Renewable Fuels	Energy Efficiency
			Water Neutrality



Competitivity



Decarbonization



Diversification



TSEG  
Commitments



## REINVENTING OUR HUMAN CAPITAL

Strengthening  
of capacities and  
knowledge

Talent prepared  
for the challenges  
of 2040

Flexible and dynamic  
organizational  
structure





# COMPETITIVE RETURNS



Capital discipline  
Cost efficiency  
Cash protection  
EBITDA growth



# THE 22-24 PLAN INCREASES FOCUS ON PROFITABLE GROWTH OF OUR CORE BUSINESS AND ON THE DIVERSIFICATION OF THE ECOPETROL GROUP

		2022	2022 - 2024
<b>Grow with the Energy Transition</b> 	Organic Investments (US\$ M)	4,800 - 5,800	17,000 - 20,000*
	Production (mboed)	700 - 705	~730
	Throughput (mbd)	340 - 360	420 - 430
	Transported Volume (mbd)	~1,000	
	Organic Investments ISA (US\$M)	~1,100	~2,600
<b>Generate Value Through TESG</b> 	TESG investment (US\$ M)	1,400	
	GHG Reduction (from 2020)	1'600,000 tCO2	
	Social investment	COP 1.5 B	
	Renewable energies	400 - 450 MW	
<b>Cutting-edge Knowledge</b> 	Innovation and Technology (US\$ M)	80	>240
<b>Competitive Returns</b> 	ROACE	>8.5%	
	EBITDA Margin	>40%	
	Efficiencies (TCOP)	~4 by 2024	

\*\*Organic investments up to US\$ M 17,000 and USD M 20,000 including organic and inorganic growth optionality  
Assumptions: Brent 2022: USD 63/Bl, 2023 and 2024: USD 60/Bl. Exchange rate 2022: COP 3,800: 1 USD, 2023 and 2024: COP 3,750: 1 USD.

# OUR INVESTMENT LEVELS INCREASE IN LINE ALONG WITH OUR GROWTH AND DIVERSIFICATION STRATEGY

## Transition Agenda

US\$ M ~ 1,400



### Decarbonization

Optimization of energy sources, wind and solar farms, geothermal energy,



### Energy efficiency



### Water management



### Quality of fuels

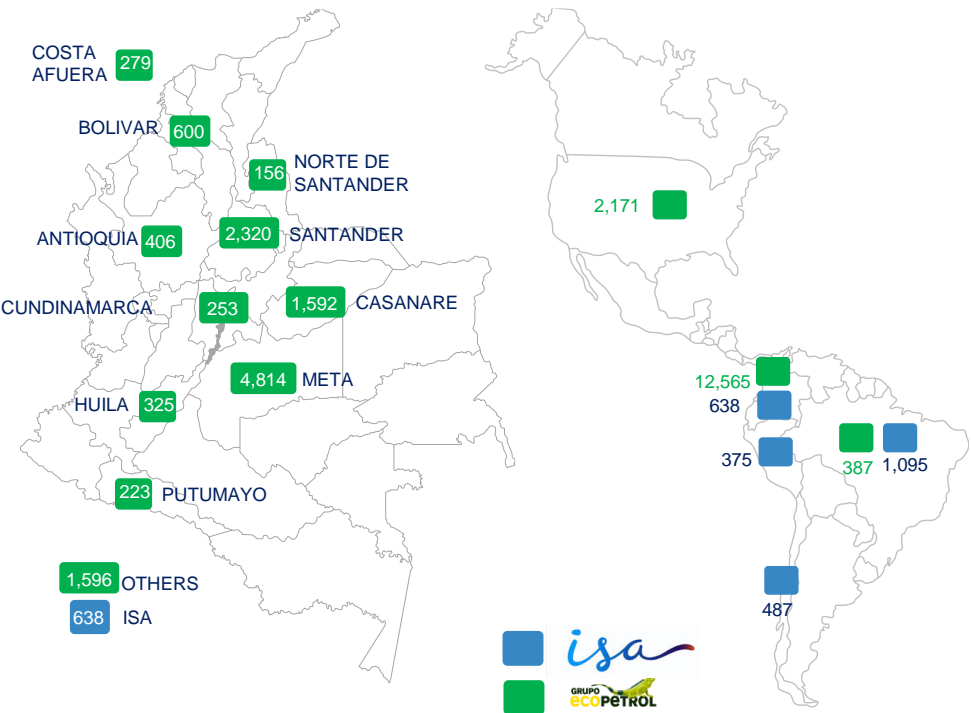


### Hydrogen

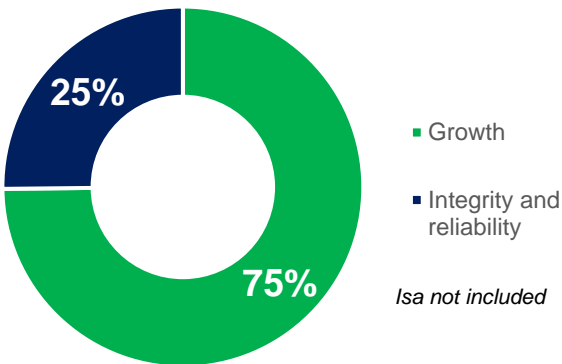
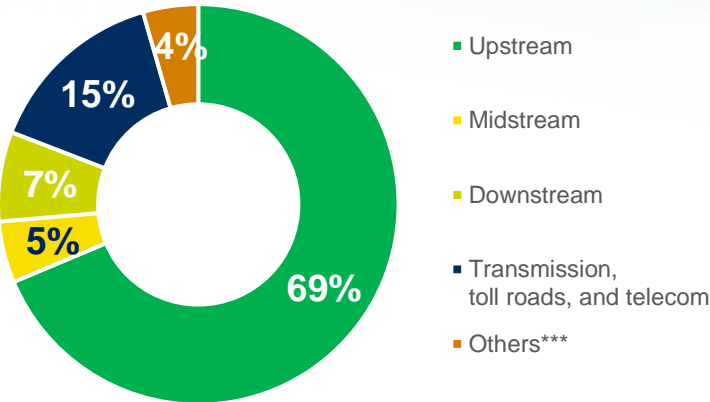
22-24  
**INVESTMENT PLAN\***  
**17,000 – 20,000** US\$ M

### Investment by Region

US\$ M



22-24  
**82%** **18%**  
**O&G** **Diversification\*\***



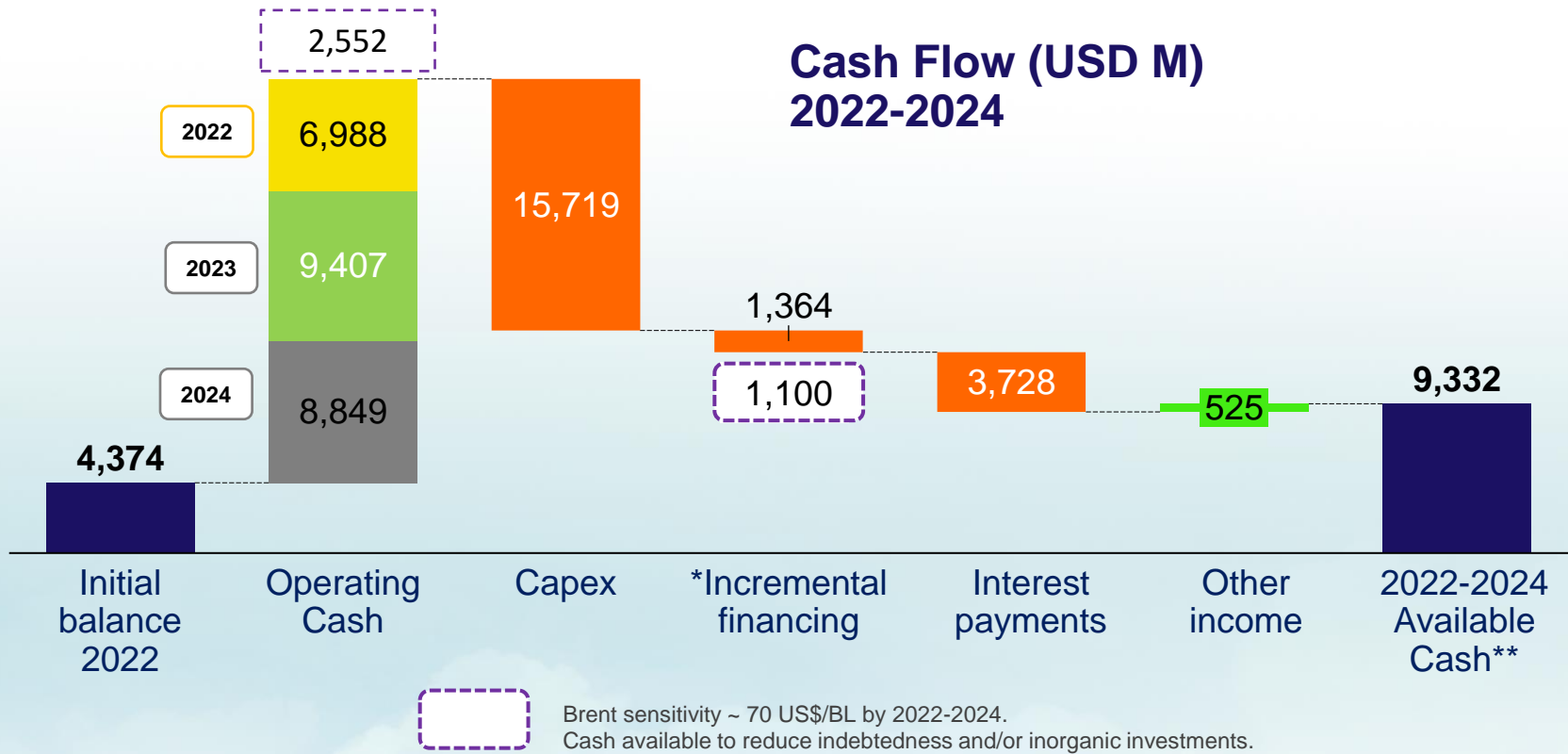
Isa not included

\*Organic investments up to US\$ M 17,000 and USD M 20,000 including organic and inorganic growth optionality

\*\*Transmission, toll roads, telecom, renewable energies, hydrogen  
\*\*\*Corporate, commercialization

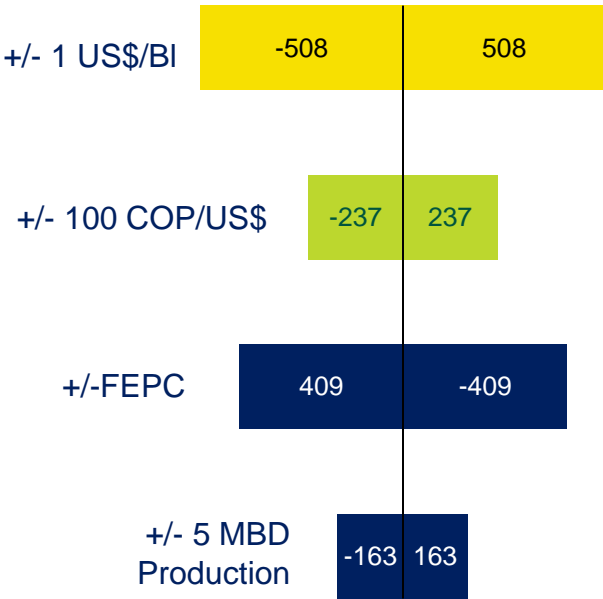


# OUR CASH GENERATION CAPACITY IS ROBUST AND LEVERAGES OUR INVESTMENT PLAN



## CASH SENSITIVITY\*

US\$ M



### Assumptions

	Brent	FX
2022	63	3,800
2023	60	3,750
2024	60	3,750

\* 3-year Average sensitivity

\* Includes estimated indebtedness of US\$ B 7.7 and repayments of US\$ B 9.0. \*\* Excludes potential equity issuance.

# COMPETITIVE AND SUSTAINABLE FINANCIAL RETURNS

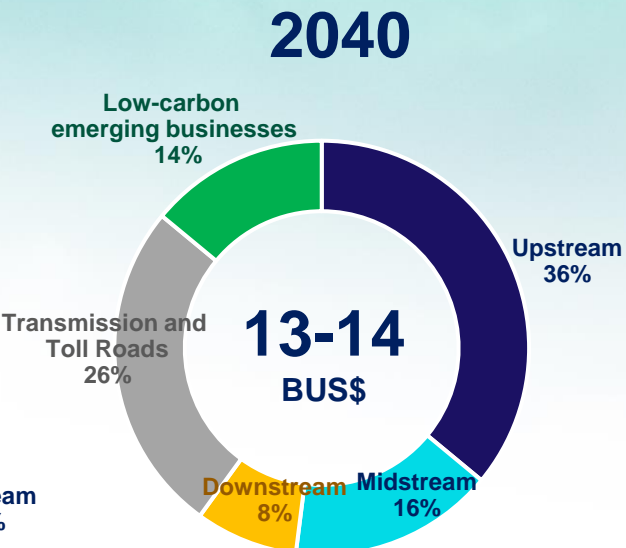
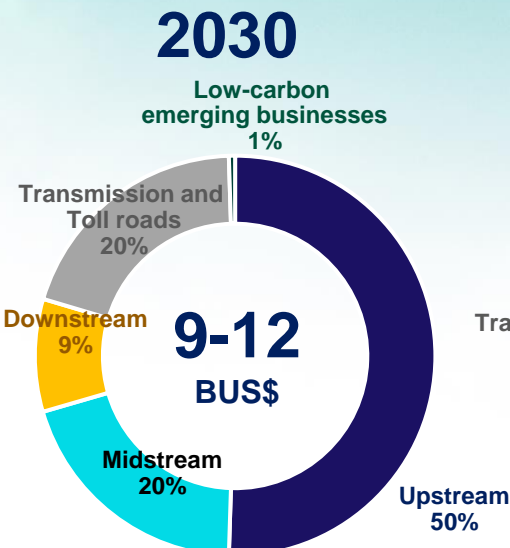
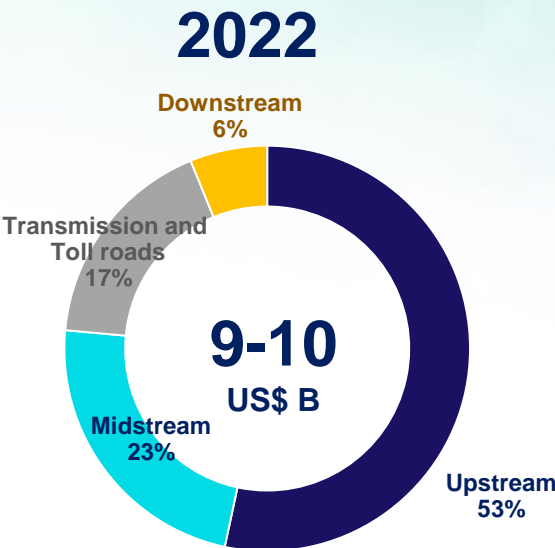
2040

VISION



EBITDA  
Strengthening

Gradual  
diversification



Profitability  
and Value  
Generation

ROACE above  
cost of capital

8-10%



Capital  
Structure

Gross Debt/EBITDA Ratio  
in line with investment  
grade metrics

<2.5x



Stakeholders  
return

Contributions  
to society

Shareholders	Employees	Local Communities			Government
40 - 60%	70%	230 thousand	2 Mm	2.4 Mm	~13 - 20 COP T
Dividend payout	of employees with reskilling* by 2030	non-oil related jobs by 2040	students benefiting from better education	people with access to public services	Royalties + taxes + dividends per year

\*Strengthen competencies and knowledge. Assumptions: Brent 2022: USD 63/BI, (2025- 2040) 45 -55 US\$/BI TRM COP 3,800

# SUMMARY

2040

VISION

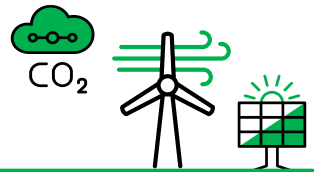
Energy that Transforms

Energy  
security

TESG

Added Value to  
society

2022-2024 PLAN



- Profitable growth of traditional business and diversification
- Accelerates decarbonization efforts
- Consolidates synergies with the energy transmission and toll roads business line



# INVESTOR DAY



ENERGY THAT TRANSFORMS

# 2040 STRATEGY

