

Perspective / also available in [Spanish](#)

# A “transition” from fossil fuels to fossil fuels?

[Start reading](#) ↓

**Ecopetrol** should do more to diversify away from oil and gas.

Published on 23 November 2023

[Javier Crespo / Shutterstock](#)



**Claudia Strambo**

Research Fellow



**Elisa Arond**

Research Fellow

Phasing out fossil fuels is critical to prevent global warming and its impacts. To be consistent with limiting warming to 1.5°C, global oil and gas production would have [to decrease by 67% and 54%, respectively, between 2020 and 2050](#)<sup>1</sup>. In the long-term, a “net-zero” world by 2050 means [“a huge decline in the use of fossil fuels”](#)<sup>2</sup>, with renewable energies largely dominating in the energy sector.

This is bad news for companies whose core business is all about extracting and distributing oil and gas, such as **Ecopetrol**. Globally, nationally owned oil and gas companies (NOGCs) [hold about 66% of global oil reserves and 58% of gas](#)<sup>3</sup>, and they provide around 40% of the [capital invested](#)<sup>4</sup> in the global oil and gas industry. They thus face an existential threat from global climate mitigation.

Their host countries also face colossal challenges, due to the central role these companies often play in financing governments, achieving energy security, fostering technological development, and generating employment domestically.

At the same time, because of the resources they manage, NOGCs could also play a crucial role in efforts to achieve climate goals, support economic diversification and harness new existing opportunities in the

energy sector.

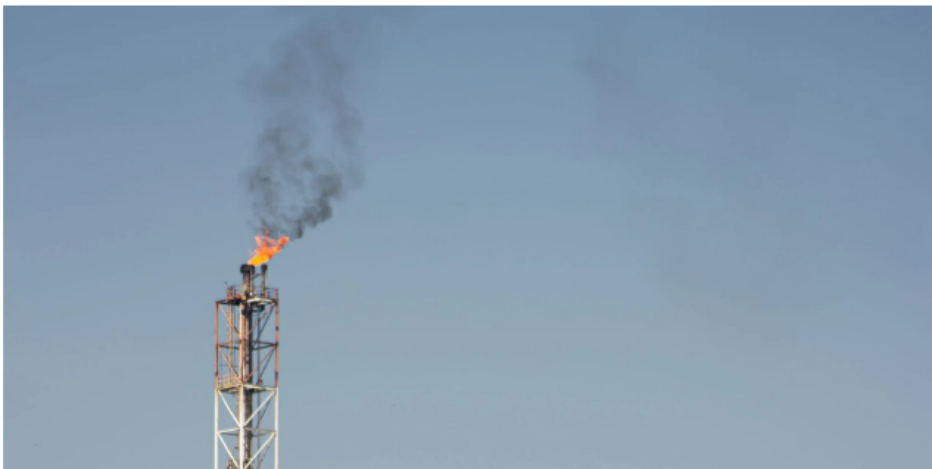
Against this backdrop, **Ecopetrol** recently announced its [objective](#) of reaching net-zero greenhouse gas emissions by 2050. And while the company has taken its first steps to diversify away from oil and gas, gas products remain at the core of its business strategy. Without doing more, **Ecopetrol** faces carbon lock-in – and it is not alone.

## Strategic diversification in the transition

Diversification is an important indicator of an oil and gas company's ability to navigate the low-carbon transition. Not only can an NOGC decarbonize its operations, it can also capture value in the long-term and increase resilience in the face of market volatility.

Both [Ecopetrol's long-term strategy and short-term plans](#) mention its goal of diversifying its activities into energy and related services. When it comes to capital expenditures (CAPEX), a good indicator of actual commitment towards diversification away from oil and gas production, **Ecopetrol** highlights its intended investments into its [business](#), ISA, which is active in electricity transmission, roads and telecommunications across Latin America.

The decision to buy the state's stake in ISA took place at a time when **Ecopetrol**'s official strategic plans did not include CAPEX for diversification outside oil and gas production. The purchase was a response to specific market opportunities, outside oil and gas, where potential new businesses opportunities are assessed on a case-by-case basis. Still, with this move, **Ecopetrol** has shown strong leadership among Latin American NOGCs with regard to strategies to diversify its core activities.



Oil extraction pump in Barrancabermeja in Colombia.

[Manolo Ramos / Shutterstock](#)



## Gas: **Ecopetrol's** main transition strategy

However, as for most oil and gas companies – both state- and privately owned – **Ecopetrol's** decarbonizing efforts are first and foremost about reducing and compensating the emissions from oil and gas production, and moving towards a more gas-rich portfolio. To do so, **Ecopetrol** plans to use a combination of measures.

Adopting low-carbon technologies and improving energy efficiency in its operations are basic steps, as is reducing flaring and fugitive emissions. The company will try carbon offsetting, while also diversifying its activities. Still, gas composes an increasingly important part of the company's future portfolio in this strategy, while hydrogen and petrochemicals are another area where the company's strategy sees potential growth.

The company recently converted its Vice-Presidency on Gas to the newly created [Vice-Presidency on Low Emissions Solutions](#)<sup>27</sup> – a unit that includes a wide range of technologies and products, including renewables, biogas and hydrogen, as well as gas, liquid petroleum gas, and carbon

capture and storage. This seemingly cosmetic change actually reflects the central role of gas in the company's transition plans. As for investments, **Ecopetrol** plans between USD 17 billion and USD 20 billion (between COP 65 trillion and COP 76 trillion) between 2022 and 2024, of which [a little bit more than two-thirds are expected to be for projects in the upstream segment](#)<sup>7</sup>.

Earlier this week, the [Colombian government announced](#)<sup>8</sup> that it is exploring a potential partnership between **Ecopetrol** and Petróleos de Venezuela SA, Venezuela's NOGC, to exploit oil and gas fields in Venezuela. The plan is to bolster the two countries' shared electricity transmission lines, while continuing to import oil and gas to Colombia – “to strengthen the company's conventional business and at the same time incorporate new technologies with new energy businesses of the Transition (solar, wind, hydrogen, geothermal, etc.)”.

## Barriers to diversification away from oil and gas

Why is it then that **Ecopetrol** and other NOGCs are not investing more in unrelated diversification? One key factor here is that of technological and policy uncertainty and the lack of examples.

[Few NOGCs](#)<sup>9</sup> have transformed their core business, so little knowledge and practical experiences exist for other NOGCs to learn from. Also, many are reluctant to take more radical steps as long as the technological winner(s) of the transition remain uncertain.

A second factor is limited capacities. From a technical perspective, identifying and taking advantage of new low-carbon business activities requires new capabilities within the companies. **Ecopetrol** has started to develop technical capabilities through the acquisition of ISA, but the NOGC's transformation requires many new skills and expertise, from managerial and financial personnel to the more operational workforce.

The third factor is the mandate given to NOGCs by their government owners. **Ecopetrol**'s state-owned nature implies that it needs a clear mandate from the Colombian government to accelerate unrelated diversification. The country's draft Just Energy Transition Roadmap suggests that the current government recognizes that and is willing to ask **Ecopetrol** to go further in this direction.

Nevertheless, **Ecopetrol** and other NOGC companies need a more coherent development and climate policy context to guide and support

their efforts to diversify away from oil and gas. Indeed, NOGCs' diversification efforts go hand in hand with the diversification of their countries' economies, fiscal revenue bases and trade balances.

## A “transition” from fossil fuels to fossil fuels?

In its [updated 2040 strategy](#), [Ecopetrol](#) highlights its aspiration to be the “leader in the Americas in the diversification of energy”, focused on “hydrocarbons, low-carbon solutions, and transmission, roads and telecoms”. It also aspires to contribute to a “Just Energy Transition”, with a “commitment to energy security, the environment and contribution to society”.

However, [Ecopetrol](#)'s pathway to becoming an integrated energy company and navigating the global energy transition remains unclear. As for the “Just Energy Transition”, the company's “just” pledge is primarily reflected in the proposed strategy to include energy access as part of ISA's priorities – without other elements of justice as defined by the current country-wide Just Transition Roadmap, especially in terms of the distribution of benefits and costs of transition, impacts on workers and communities, and addressing other socio-environmental legacies.

So while [Ecopetrol](#) has started diversifying into new businesses, its energy transition strategy seeks to maximize the value of the company's existing oil and gas assets, and even to expand oil and gas production. Such investments are likely to deepen [carbon lock-in dynamics](#) and, in turn, increase the [risk of assets being stranded](#) and NOGCs failing to fulfill their public responsibility and mission. Moreover, this approach maintains states' economic and fiscal dependence on the oil and gas industry.

Instead, as we argue [in a report published today](#), [Ecopetrol](#) and other NOGCs should accelerate their departures away from oil and gas. In addition to reduced emissions, they could then take advantage of the other benefits of diversification: improved resilience and reduced vulnerability to external and domestic pressures, such as oil and gas price volatility, supply disruptions, environmental disasters and investor pressure.

In other words, it is in [Ecopetrol](#)'s own interests to be more ambitious in its transformation. Other oil and gas companies can then follow their example, if [Ecopetrol](#) truly wants to lead the way to a new energy future.

# SEI authors



**Claudia Strambo**

Research Fellow  
SEI Headquarters



**Elisa Arond**

Research Fellow  
SEI Latin America

## Topics and subtopics

Climate : [Fossil fuels](#)

## Tags

[renewable energy](#), [clean energy](#), [industry](#), [just transition](#)



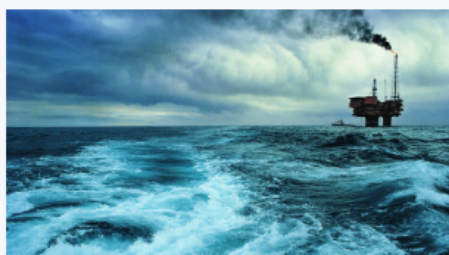
## Related centres

[SEI Headquarters](#), [SEI Latin America](#)

## Regions

[Colombia](#)

## Related projects



### Oil and gas transitions

**Project /** This project will develop a better understanding of oil and gas transition scenarios, and co-create evidence to accelerate policy action in the North Sea.

About [Climate policy](#), [Fossil fuels](#) and [Planning and modelling](#)



### Just transitions from coal in Colombia, Indonesia and South Africa

**Project /** SEI aims to support transitions from coal that address inequality and poverty.

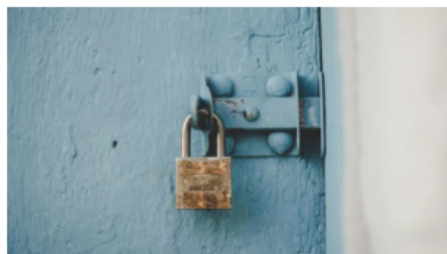
About [Fossil fuels](#)

## You might also be interested in



### Energy transition ambitions of four national oil and gas companies in South America

**SEI report /** What diversification strategies do NOGCs use to engage in an energy



### Transition or lock-in? Tracking institutional support for gas in two Latin American case studies

**SEI working paper /** This working paper examines cases in Colombia and México



### Five considerations for a just transition for Indigenous communities and ethnic minorities

**Perspective /** To ensure a just transition

transition? A view of four South American companies.

About [Business](#) and [Fossil fuels](#)

where gas infrastructure is expanded with little market justification, risking gas lock-in.

About [Behaviour and choice](#), [Business](#), [Energy access](#), [Fossil fuels](#) and [Public policy](#)

[Participation](#) to ensure a just transition, ethnic minority groups and Indigenous Peoples need to be involved in decision-making and benefit sharing.

About [Climate policy](#), [Energy access](#), [Fossil fuels](#), [Participation](#), [Public policy](#) and [Renewables](#)

## Sign up to the global SEI newsletter

Get the latest updates and invitations to your inbox with SEI's global newsletter.

Email address \*

I accept the [privacy policy](#) and want to receive newsletters from SEI

---

Social media

---

 Facebook

---

 LinkedIn

---

 X (previously Twitter)

---

Jobs

---

Press room

---

About SEI

---

Whistleblowing

---

Privacy policy

---

Cookie notice

---

Accessibility

---

Contact

Centres: [SEI Africa](#) / [SEI Asia](#) / [SEI Headquarters](#) / [SEI Latin America](#) / [SEI Oxford](#) / [SEI Tallinn](#) / [SEI US](#) / [SEI York](#)

© Stockholm Environment Institute 2023