



2026

HYDROGEN ECOSYSTEM IN COLOMBIA

Ministry of Mines and Energy

11th · 13th March 2026

Agenda

1. Regulatory, Policy, and Legal Framework Progress
2. Identified Challenges
3. Identified Investment Opportunities
4. Colombia's global positioning



Energía



Government's firm commitment to green hydrogen to accelerate decarbonization



Gustavo Petro @petrogustavo · Nov 22, 2022



Buscaré que el Estado todo ayude a desarrollar los proyectos de energías limpias más grandes de América Latina.

Ecopetrol debe alistarse a entrar con fuerza en el mercado del **hidrógeno** verde.



Gustavo Petro @petrogustavo · 12 dic. 2025



He inaugurado la instalación de la planta más grande de producción de **Hidrógeno** Verde de América del Sur.

Producirá 800 toneladas de **Hidrógeno** Verde al año con energía completamente limpia a través de una granja solar que inauguré hace meses en Reficar.



Edwin Palma Egea

@PalmaEdwin



El hidrógeno es el futuro.



Minenergía @MinEnergiaCo · Nov 14, 2025

¡El hidrógeno llega para impulsar la #TransiciónEnergéticaJusta en Colombia!



CARTAGENA

Refinería de Cartagena inició la instalación de la mayor planta de hidrógeno verde de Suramérica

Policy, Regulatory, and Legal Progress

Our Progress:

2014

LAW 1715 OF 2014
Tax incentives for FNCERs and efficient energy management.

LAW 2099 OF 2021
Extends incentives to blue and green hydrogen, geothermal energy, and CCUS technology.

COLOMBIA'S HYDROGEN ROADMAP
Sets targets and actions for 2030 and 2050.

2021

2022

DECREE 1476 OF 2022
Promotes innovation, research, production, storage, distribution, and use of hydrogen.

DECREE 1537 OF 2022
Declaration of public utility and social interest for green hydrogen projects.

2023

LAW 2294 OF 2023 - National Development Plan (NDP)
Extensive incentives for white hydrogen.

CONPES 4118 OF 2023
National Port Policy, modernization, and sustainability.

2024

JUST ENERGY TRANSITION ROADMAP

DECREE 1597 OF 2024
Promotion of low-emission hydrogen.

Challenges for 2026

Governance, institutional coordination, and regulatory clarity

Decree establishing an intersectoral commission for hydrogen governance. Involves MinAgricultura, MinHacienda, MinTransporte, MinCiencias, MinCIT, MADS, and DNP.

CONPES on low-emission hydrogen. 71 actions by 2030.

Low-emission hydrogen bill to extend tax incentives to hydrogen derivatives.

Infrastructure and domestic demand

- ✓ Integration of hydrogen into national energy planning (PEN 2026 - UPME).
- ✓ **Pilot project for blending** natural gas with hydrogen (Promigas facilities). 2-5% blend feasible.



Gustavo Petro  @petrogustavo · Jan 13, 2022

Esta es la posibilidad de usar nuestras redes de gas natural, pero con **hidrógeno** verde que no emite gases efecto invernadero.

Investment opportunities in low-emission hydrogen in Colombia



Investor Pathway



Tax incentives for hydrogen - UPME

1. **50% income tax deduction** on the investment made in the project, applicable for up to 15 years.

2. **VAT exemption** on the purchase of equipment, components, machinery, or services included in the list issued by UPME.

Law 1715 of 2015

3. **Tariff exemption on the import** of machinery and other inputs included in the list issued by UPME.

4. **Accelerated depreciation** of assets, applicable to equipment, machinery, and civil works included in the list issued by UPME.



**Hydrogen
incentive module**

Where to invest?



Wind: In Guajira, twice the global average



Sun: In Guajira, radiation 60% above the global average



IRENA: In Colombia, by 2050, LCOH will be one of the cheapest and most competitive in the world



HUB	Energy potential	Biomass	H2 demand
Cartagena	High solar (20% FP) High wind (36% FP)	High	Chemical industry: ammonia and H ₂
Barranquilla	Medium solar (16% FP) Very high wind(54%FP)	Moderate	Chemical industry: ammonia
Valle del Cauca	Medium solar (16% FP) Low wind (10% FP)	Very high	Agricultural and industrial sector
Antioquia	Medium solar (17% FP) Low wind (4% FP)	High	Agriculture (fertilizers)
La Guajira	Very high solar(20% FP) Very high wind(77% FP)	Low- moderate	Large-scale production and export

FP: Plant Factor

Which sectors to invest in?

Greenhouse gas (GHG) emissions in Colombia



33%

Energy



44% of energy consumption goes to the transport sector, which accounts for 11% of total GHG emissions



Climate commitment: reduce greenhouse gas emissions by 51% by 2030 (COP26)

56%

Land use



7%

Waste



4%

Industry

End uses of H2 and derivatives according to the hydrogen roadmap, which is aligned with Colombia's climate commitments



Refining



Buses



Trucks



Passenger cars



Fertilizers



Exports



Mining trucks



Power generation



Aviation



Steel



Maritime

2020

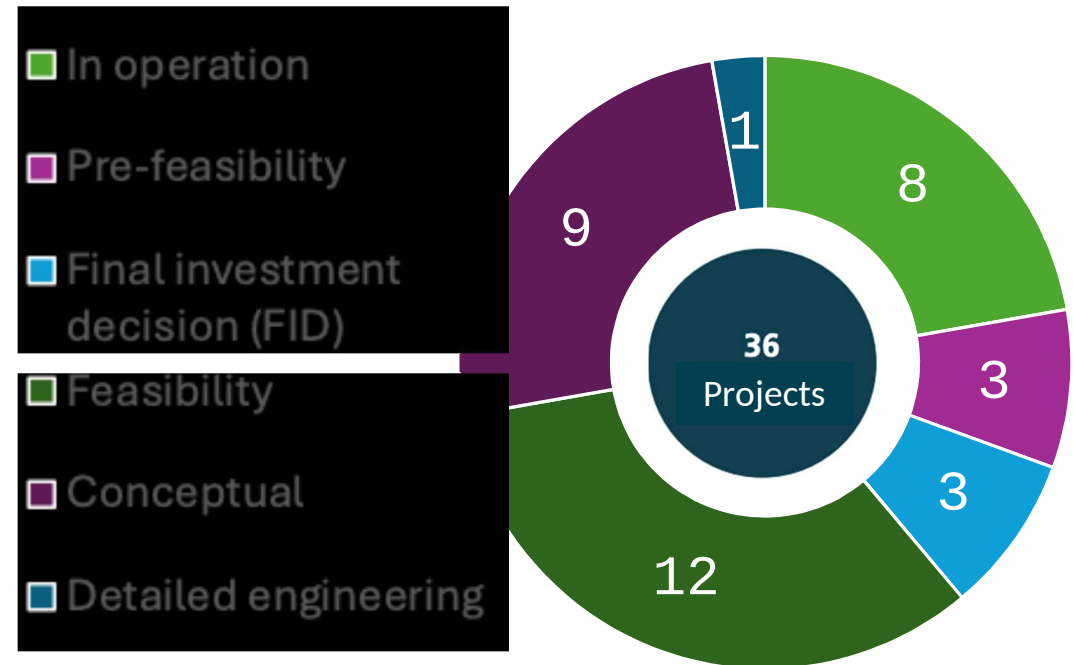
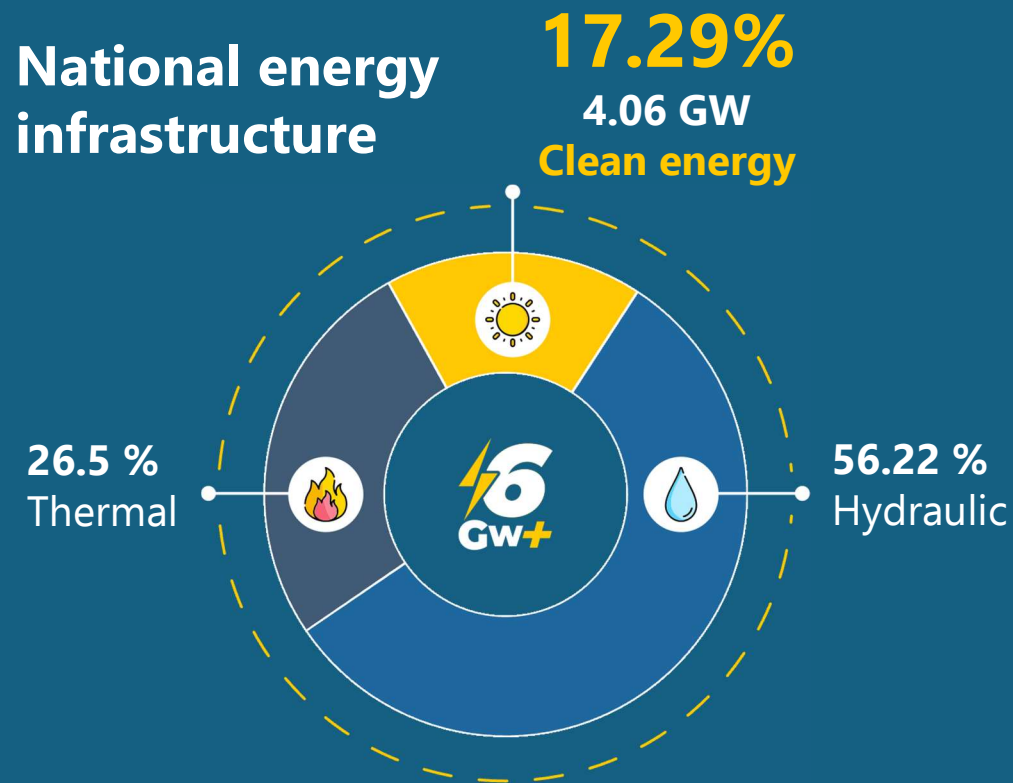
2030

2050

Projections for domestic demand for ammonia, methanol, and sustainable aviation fuels (SAF) are growing by more than 18% between 2030 and 2050.

What do we have today?

Announced H2 initiatives and production projects - 2025



*Includes: Installed capacity of the SIN (operation and testing), distributed generation, and small- and large-scale self-generation.

Source: Information from the ANDI NATURGAS Hydrogen Chamber and the Colombian Hydrogen Association (March 2025)



Colombia's global positioning

- According to the *World Economic Forum*, Colombia has hydraulic, solar, and wind potential that positions it as one of the **five (5) most competitive countries** for hydrogen production.
- By 2025, Colombia ranked **third (3rd) in the region** with 73 points in the *H2LAC hydrogen index* for Latin America.
- In the *2025 Climate Change Performance Index (CCPI)*, Colombia ranks **27th globally**, standing out for its good performance in efficient energy use, advances in climate policy, and gradual progress in non-hydraulic renewables.

Hydrogen in Colombia is advancing

Visit our website



Elkin Leonardo Pérez Zambrano
Secretary General

Ministry of Mines and Energy
Republic of Colombia
elperez@minenergia.gov.co