CT-EN-009 — Green Hydrogen

origo_id	CT-EN-009
origo_label	Green Hydrogen
sector	EN
source	origo
cpi_aligned	Low-carbon fuels — green hydrogen
eu_taxonomy_aligned	Y — NACE C20.11 manufacture of hydrogen; strict lifecycle emissions threshold
cbi_eligible	Y — Hydrogen criteria under CBI with production emissions cap
iea_aligned	Y — IEA ETCS hydrogen production (electrolysis from renewables)
col_gf_sector	Energía
col_gf_activity	Producción de hidrógeno verde mediante electrólisis con energías renovables
col_gf_aligned	Y
col_ndc2030_aligned	Y — green hydrogen is identified in Colombia's Long-Term Strategy as key to hard-to-abate sector decarbonisation
col_sisclima_relevant	Y
col_ley2169	Y — Art. 3 mitigation; Art. 7 clean energy development
latam_colombia	Y
cth_clp_coverage	N — nascent market with no CLP SME participation yet
cth_data_coverage	N
schema_version	1.1
last_updated	2026-05-27

Description

Production of hydrogen through electrolysis powered by renewable electricity (green hydrogen), and its application in industry, transport, and energy storage. Green hydrogen is a nascent but strategically important sector globally and in Colombia, where exceptional renewable resources in La Guajira position the country as a potential export hub.

Colombia Context

Colombia published its Hoja de Ruta del Hidrógeno in September 2021, setting targets of 1-3 GW of electrolyser capacity by 2030 and positioning La Guajira as the production epicenter. Ley 2099 Art. 14 establishes regulatory sandbox provisions for hydrogen pilot projects. MinMinas created the Misión de Hidrógeno Verde y Azul to coordinate policy. Ecopetrol, the state oil company, has committed $1 billion to green hydrogen by 2030 as part of its energy transition strategy. Siemens Energy and EDF signed MoUs with the Colombian government for La Guajira green H2 projects. The hydrogen roadmap identifies five priority applications: ammonia production

(fertilizers), oil refining, heavy transport, mining, and export to Europe/East Asia. Current delivered green hydrogen cost in Colombia is estimated at $4-6/kg, with a target of $1.5-2/kg by 2030 as electrolyser and renewable costs decline. CONPES 4075 includes green hydrogen as a pillar of the just energy transition, emphasizing local value chain development.

EUDR Relevance

This node has no direct EUDR commodity relevance.

CTH Data Coverage

No CLP cohort companies are in green hydrogen. This is an emerging market dominated by large corporates (Ecopetrol, Promigas) and international developers. CTH monitors the hydrogen pipeline for future taxonomy and market intelligence updates. Sustenttia does not yet include hydrogen-specific assessment modules.

Green Finance Alignment

Fully TVC-aligned for green hydrogen production. CBI-eligible under hydrogen criteria with lifecycle emissions cap of 4.4 kgCO2e/kgH2. EU Taxonomy aligned under C20.11 with strict 3.0 tCO2e/tH2 lifecycle threshold (Delegated Act). IDB and GIZ have funded hydrogen feasibility studies in Colombia. The Hydrogen Council projects $2.5 billion in LATAM hydrogen investment by 2030, with Colombia capturing 15-20%.


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Revisión #1
Creado 2026-05-27 05:10:11 UTC por Gideon Blaauw
Actualizado 2026-05-27 05:10:11 UTC por Gideon Blaauw