CT-EN-003 — Small Hydropower

origo_id	CT-EN-003
origo_label	Small Hydropower
sector	EN
source	origo
cpi_aligned	Renewable energy generation — small hydro
eu_taxonomy_aligned	Partial — EU Taxonomy includes hydro under D35.11 but with strict DNSH criteria on ecological flow and river connectivity
cbi_eligible	Y — Hydro criteria under CBI, limited to run-of-river and small scale (<25 MW)
iea_aligned	Y — IEA ETCS hydropower (small-scale category)
col_gf_sector	Energía
col_gf_activity	Generación de energía eléctrica a partir de pequeñas centrales hidroeléctricas (PCH)
col_gf_aligned	Y
col_ndc2030_aligned	Y — maintaining and expanding clean hydro base is part of NDC strategy
col_sisclima_relevant	Y
col_ley2169	Y — Art. 7 renewable energy portfolio
latam_colombia	Y
cth_clp_coverage	Y — 2 CLP companies in micro-hydro development for rural communities
cth_data_coverage	Y
schema_version	1.1
last_updated	2026-05-27

Description

Small hydropower (PCH, <20 MW) and micro-hydro (<1 MW) generation, including run-of-river systems. Colombia derives approximately 70% of its electricity from hydropower, making it the backbone of the national grid. However, climate variability (El Niño/La Niña cycles) increasingly threatens hydro reliability, driving diversification into solar and wind.

Colombia Context

Colombia's hydro-dominant grid (approximately 12 GW of large hydro, plus 1 GW of PCH) is both an asset and a vulnerability. The 2015-2016 El Niño event caused severe energy rationing, accelerating policy support for non-hydro renewables under Ley 1715 and subsequently Ley 2099. PCH projects (<20 MW) are classified as non-conventional renewables under Colombian law and qualify for Ley 2099 incentives. The IPSE (Instituto de Planificación y Promoción de Soluciones Energéticas) promotes micro-hydro in Zonas No Interconectadas (ZNI). CONPES 4075 recognizes small hydro's role in rural electrification but emphasizes complementarity with solar to reduce climate vulnerability. CREG Resolución 243 de 2016 regulates PCH grid connection and dispatch priority.

EUDR Relevance

This node has no direct EUDR commodity relevance.

CTH Data Coverage

Two CLP cohort companies develop micro-hydro systems for off-grid rural communities in Antioquia and Nariño. Sustenttia diagnostics capture energy source profiles where hydro is the primary input. REIN Hub data from PDET municipalities documents existing PCH installations and their operational status.

Green Finance Alignment

TVC-aligned for small hydropower generation. CBI eligibility is limited to run-of-river and projects under 25 MW with demonstrated ecological flow maintenance. EU Taxonomy alignment is partial — strict DNSH criteria require environmental impact assessments demonstrating no degradation of water body status. Findeter has offered green credit lines for PCH projects in rural Colombia.


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