Geothermal Energy

Source Metadata

Field	Value
source	cbi
source_version	CBI Taxonomy (current)
source_id	CBI-ENE-003
cbi_sector	Energy
bond_eligible	Y
mitigation	Y
adaptation	N
last_checked	2026-05-26

CBI Sector Criteria

CBI includes geothermal energy under its renewable energy sector criteria. Geothermal power plants that generate electricity from underground heat sources are eligible for certification provided their direct lifecycle emissions remain below a defined threshold. Enhanced geothermal systems (EGS) and conventional hydrothermal facilities both qualify, subject to emissions intensity verification.

Eligible Activities & Assets

Eligible assets include: conventional hydrothermal power plants (flash steam and dry steam); binary cycle geothermal plants using lower-temperature resources; enhanced geothermal systems (EGS) involving engineered reservoirs; geothermal district heating and cooling networks; direct-use geothermal applications for industrial heat; and exploration and well-drilling infrastructure for confirmed geothermal reservoirs.

Certification Process

Verifiers assess geothermal projects for emissions intensity, typically requiring lifecycle CO_2-equivalent emissions below 100 gCO_2e/kWh. Pre-issuance review includes geological survey data, reservoir engineering assessments, and environmental impact studies. Post-issuance monitoring requires ongoing emissions measurement and resource sustainability reporting.

LATAM Market Context

Geothermal green bond issuance in LATAM remains limited but promising. Mexico leads the region with significant geothermal capacity (nearly 1 GW), followed by Central American nations. Colombia has identified geothermal potential in the Andean volcanic belt, particularly in the Nevado del Ruiz and Azufral areas, though commercial development is still in early stages. Chile has explored geothermal resources in the Atacama region.

Colombia Green Finance Taxonomy Alignment

The TVC includes geothermal energy generation as an eligible mitigation activity. Colombia's geothermal regulatory framework supports exploration permits, and future development projects could access green bond financing under both CBI and TVC criteria. The Servicio Geológico Colombiano has mapped priority geothermal zones suitable for development.

Cleantech Taxonomy Crosswalk

Maps to Cleantech Taxonomy sector ES (Energy) — specifically ES-RE-GEO (Renewable Energy: Geothermal). Cross-references to IN (Industry) for direct-use industrial heat applications and to BU (Buildings) for district heating networks.

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