CT-WA-001 — Waste-to-Energy & Biogas

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iea_aligned	N
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col_gf_activity	Aprovechamiento energético de residuos sólidos y generación de biogás
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last_updated	2026-05-27

Description

Technologies that convert solid waste, organic waste, and landfill gas into usable energy forms — electricity, heat, or biogas (biomethane). Includes anaerobic digestion, landfill gas capture, thermal waste treatment with energy recovery, and biogas upgrading to biomethane for grid injection or vehicle fuel.

Colombia Context

Colombia's TVC waste sector explicitly covers energy recovery from waste as an eligible green activity. PGIRS (Planes de Gestión Integral de Residuos Sólidos) at the municipal level increasingly include waste-to-energy components, particularly landfill gas capture. The NDC 2030 waste sector target aims for significant methane reduction from landfills. Major landfills like Doña Juana (Bogotá) and La Pradera (Medellín) have biogas capture systems, though utilization rates remain low. Coffee processing generates significant organic waste (pulpa,

mucílago) suitable for biogas production in the Eje Cafetero. Ley 2169 (Acción Climática) reinforces waste sector emission reduction mandates.

EUDR Relevance

Indirect EUDR relevance: agricultural waste from EUDR-regulated crops (coffee pulp, cacao husks, palm oil mill effluent) can serve as biogas feedstock. Waste-to-energy from these residues supports circular economy approaches within EUDR supply chains.

CTH Data Coverage

CTH data coverage through the Origo platform tracks waste-to-energy project data in Colombia. CLP does not currently operate waste sector field programs. REIN Hub could support waste-to-energy startups, particularly those valorizing agricultural residues from coffee and cacao processing.

Green Finance Alignment

Triple-aligned green finance node. TVC covers waste energy recovery under Gestión de residuos. CBI Waste criteria include waste-to-energy with emissions thresholds. EU Taxonomy Activity 5.7 (Anaerobic digestion of bio-waste) and 5.10 (Landfill gas capture and utilisation) are directly applicable. Carbon credit revenue from methane avoidance strengthens the financial case for green bond structuring.


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