

Biogas - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2026 - 2031)

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Report description:

Biogas Market Analysis

The Biogas Market was valued at 21.65 gigawatt in 2025 and estimated to grow from 22.64 gigawatt in 2026 to reach 28.34 gigawatt by 2031, at a CAGR of 4.59% during the forecast period (2026-2031).

Maturing policy incentives, a pivot from power-only plants to renewable natural gas (RNG) upgrading, and rising corporate decarbonization commitments are re-shaping investment criteria. Transport fuel mandates reward the negative-carbon attributes of dairy and food-waste gas, while utilities integrate dispatchable biogas to stabilize solar- and wind-heavy grids. Europe retains first-mover advantage because of feed-in tariffs and grid-ready biomethane infrastructure, but South America's 10% CAGR through 2030 underlines how fresh policy frameworks can accelerate late-entry regions. Mid-scale 0.5-2 MW facilities still dominate capacity additions, yet sub-0.5 MW community plants are scaling quickly where distributed-generation incentives cut connection queues. Competitive intensity remains high: established integrators such as EnviTec Biogas defend their share by self-funding capacity, whereas new entrants focus on modular upgrading and carbon capture add-ons to lift yields and secure premium offtake contracts.

Global Biogas Market Trends and Insights

Supportive Government Incentives & Renewable Energy Mandates

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Production-based tax credits are replacing legacy feed-in tariffs, lengthening revenue visibility for developers. The 2025 U.S. biogas credit pivots projects toward RNG upgrading rather than electricity sales. India's Compressed Bio-Gas scheme backs 5,000 plants with fixed offtake, and Poland's FENIKS program allocates USD 93 million, leveraging European Union funds to crowd-in further capital. These evolving instruments favor distributed plants that unlock rural income, close nutrient loops, and stabilize the grid.

Decarbonization Targets of Utilities & Corporates

Utilities now value biogas as a firming resource that fills evening demand gaps when solar output fades. Corporates procure RNG to cut Scope 3 emissions and lock in verifiable carbon credits. Negative-carbon intensity scores in California let dairy RNG trade at premiums 3-4 times fossil gas, raising project internal rates of return. Third-party verification frameworks elevate demand for plants with transparent methane-capture accounting.

High Capex Relative to Solar & Wind Projects

Installed costs of USD 3,000-5,000/kW outstrip utility-scale solar, complicating debt terms. EnviTec Biogas offsets this by self-funding EUR 100 million to add 300 GWh capacity, capturing economies of scale that smaller developers cannot. Because of feedstock volatility and operational complexity, lenders typically demand 15-20% equity.

Other drivers and restraints analyzed in the detailed report include:

Landfill Diversion & Circular-Economy Waste Directives
Rising Demand for Renewable Natural Gas in Transport
Sub-optimal Feedstock Logistics in Rural Areas

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Livestock manure delivered 37.25% of feedstock input in 2025 and anchors long-term supply agreements with farms. Yet food-waste volumes expand 7.12% CAGR as cities adopt landfill bans that shift organics toward digesters, adding tipping-fee revenue to energy income. Agricultural residues and sewage sludge are flexible co-digestion recipes that smooth seasonal imbalances.

Digesters blending manure with food scraps regularly hit 827 L/kg volatile solids yields, thanks to balanced C:N ratios. Municipal policy support means urban waste haulers actively seek digester partners, letting operators lock multi-year gate-fee contracts that strengthen balance sheets.

Wet digestion systems owned 59.10% of 2025 installations, reflecting decades-long supplier ecosystems and lower capex. Dry digestion grows 7.55% CAGR to 2031 because it tolerates 25-35% solids and uses less water, ideal for arid locations or high-solids waste.

Technology selection correlates with feedstock profile: poultry litter, yard trimmings, or packaged food waste increasingly favors dry twin-digester lines that cut preprocessing steps and water bills. Two-stage thermophilic setups achieve up to 43% higher energy recovery, yet only sophisticated operators absorb the extra control-system costs. The biogas market, therefore, segments around fit-for-purpose designs rather than a single dominant process.

The Biogas Market Report is Segmented by Feedstock (Agri Residues, Livestock Manure, Food and Beverage Waste, and More),

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Process Technology (Wet Anaerobic, Dry Anaerobic Digestion, and Landfill Gas Recovery), Plant Capacity (Below 0.5 MW, 0.5 To 2 MW, Above 2 MW), Application (Electricity Generation, Heat Generation, Vehicle Fuel/RNG, and More), and Geography (North America, Europe, Asia-Pacific, South America, and More).

Geography Analysis

Europe held 65.10% of the biogas market share 2025 as legacy feed-in tariffs and standardized biomethane injection codes derisk projects for lenders. Germany alone hosts more than 400 plants, and the REPowerEU goal of 35 bcm of biomethane by 2030 further lifts pipeline-quality gas demand. Denmark illustrates diversification: six biogas-to-marine-fuel plants supply liquefied bio-LNG to shipping lanes, marrying waste valorization with IMO carbon rules.

South America records the fastest expansion at 9.45% CAGR through 2031 as Brazil's Petrobras issues biomethane tenders and Argentina adds 82 MW in 2024 under agricultural-waste incentives. However, pipeline access and credit risk still hamper scale-up, so developers often cluster near sugarcane mills or meat-packing hubs where waste is abundant and offtake immediate.

North America stands at an inflection point: over 2,500 U.S. sites generated 1.4 million scfm in 2024, and agricultural projects exceeded landfill gas for the first time. Canada's Clean Fuel Regulations mimic California's LCFS, widening premium RNG catchment. In Asia-Pacific, India targets 5,000 compressed biogas plants by 2030, supported by guaranteed offtake, while China embeds biogas within rural revitalization plans, pairing digesters with grid-connected micro-grids for village electrification.

List of Companies Covered in this Report:

Engie SA DMT International IES Biogas EnviTec Biogas AG Weltec Biopower GmbH Hitachi Zosen Inova AG AEV Energy GmbH AAT Abwasser- und Abfalltechnik GmbH BEKON GmbH Nijhuis Saur Industries Xebec Adsorption Inc. Bright Renewables BV Scandinavian Biogas Fuels International AB Naskeo Environnement PlanET Biogas Group BTS Biogas SRL BioConstruct GmbH Wartsila Corporation Greenlane Renewables Inc. Clarke Energy

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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