



Newsletter IEA Bioenergy Task 37: 08/2026

Reports & Statistics

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The IEA Bioenergy Annual Report 2025

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The IEA Bioenergy Annual Report 2025 describes the latest developments and key achievements from across the IEA Bioenergy network and summarizes the work accomplished by the 17 Tasks including Task 37 on Biogas. It includes a special feature article on 'BECCUS and Carbon Management: Status and Prospects' prepared by Task 40 (Biobased Deployment & Carbon Management). The document comprises key information such as Task participation, Contracting Parties, budget tables and lists of reports and papers produced by the Technology Collaboration Programme. In total 18 contracting parties are collaborating in the IEA Bioenergy Agreement.

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IEA report: Production of liquid and gaseous biofuels in India could double by 2030

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India's bioenergy sector is set to play an important role underpinning the country's rapidly growing energy markets as robust policy frameworks boost ethanol and compressed biogas production and open new opportunities for biodiesel and sustainable aviation fuels, according to a new report from the International Energy Agency. The latest analysis, which provides forecasts for liquid and gaseous biofuel growth to 2030, shows that these fuels can strengthen India's energy security by reducing reliance on imported fuels, support economic development and job creation, especially in rural communities – and also contribute to emissions reductions targets.

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Shaping the future of bioeconomy

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The Swiss University of Applied Science (ZHAW) organized a conference highlighting how renewable sources, technical processes and chemical innovations can drive sustainable economic development. A series of focused sessions – ranging from microbial processes and carbon utilization to high value biomass pathways and business-oriented innovations – explored how research can be translated into practical solutions. All aspects were touched, from PhD work to first successful start-ups. The conference was organized by the Swiss member of Task 37, [Hajo Nägele](#). The Task was well represented anyway with contributions from the former and actual Task leader Jerry Murphy resp. Bernhard Drosig.

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The state of US Clean Energy finance: 2025 Market intelligence report

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[Crux is one of the largest financing companies for clean energies. One of its latest research](#) reports uncovered that total clean energy tax credit monetization in the US reached \$63 billion in 2025, a 27% increase year over year. In particular, newly eligible \$45Z clean fuel production tax credits (PTCs) entered the market in 2025 and have already emerged as one of the most valuable credits to monetize. For producers generating these credits, understanding how to structure, diligence, and price these tax credits are critical to maximizing their value.

Based on \$55 billion in proprietary transaction data, including some of the market's earliest \$45Z transfers, the latest Market Intelligence report offers an unmatched analysis of how these deals, as well as project financing debt and tax equity, are getting executed.

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Digestate in Europe: State of Play in 2026

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The new report by the European Biogas Association provides an overview of how digestate is currently produced, managed, and used across Europe. It highlights digestate's key role in the circular economy, particularly in agriculture where it can replace synthetic fertilizers, improve soil health, and recycle essential nutrients such as nitrogen, phosphorus, and potassium. According to the report, anaerobic digestion plants in Europe produced an estimated 25 million tons of digestate dry matter in 2024, mainly from agricultural feedstocks, with manure accounting for around 60% of input materials. Such production volumes could technically replace more than 16% of mineral

nitrogen fertilizers used in European agriculture, alongside up to 30% of phosphorus and 10% of potassium demand. Economically, effective digestate management can be a game changer for the viability of biogas plants.

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New EBA Report Mapping Europe's Biogases Support Schemes

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The second edition of the European Biogas Association's Market Intelligence Report on Support Schemes for Biogas and Biomethane covers 26 countries (including 22 EU Member States, Norway, Switzerland, Ukraine, and the United Kingdom) to examine past, current, and planned subsidy schemes across Europe. The report offers detailed crosscountry comparisons and indepth national analyses, highlighting best practices as well as persistent gaps and challenges. This report is accessible to all EBA members via EBANET.

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Global cost drivers and regional trade-offs for low-carbon fuels

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Low-carbon fuels (LCFs) such as green hydrogen, synthetic hydrocarbons, and biofuels are critical for decarbonizing sectors that are difficult to electrify. This study presents a globally harmonized techno-economic assessment of 21 LCF production pathways, including power-to-X, biomass- and sun-to-liquids, and multiple hydrogen routes, evaluated across all countries under three future scenarios for 2024, 2030, and 2050. The model integrates spatially explicit resource data, learning-driven capital cost trajectories, and dynamic, country- and technology-specific costs of capital. By 2050, median levelized costs are projected to range from 0.07 to 0.10 EUR₂₀₂₄ per kWh for green hydrogen, 0.15 to 0.18 EUR₂₀₂₄ per kWh for power-to-liquid kerosene, and 0.14 to 0.20 EUR₂₀₂₄ per kWh for most bio-based aviation fuels. Nuclear- and methane-based hydrogen emerge as primary options in many regions. Financing conditions are often as decisive as natural resources in determining competitiveness. These insights highlight that technology innovation must go hand-in-hand with investment de-risking and international policy coordination.

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Mobilization of industrial capacity building for advanced biofuels

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In collaboration with Exergia and PoliTo, BEST analyzed for the European Commission how to successfully build up production capacity for advanced biofuels in the EU. The report has now been published by the Commission. The key messages of the report are:

- 1) Without biofuels, the EU cannot achieve its goals for decarbonizing the transport sector;
- 2) The required volumes can only be provided based on a portfolio of different technologies and feedstocks;
- 3) Commercially available technologies must be further expanded, while simultaneously advancing the development of technologies such as gas production via Fischer-Tropsch synthesis and Alcohol-to-Jet; and
- 4) Financial support is needed for the manufacturing industry per liter of biofuel produced, e.g., in the form of a contract for difference, as well as for agriculture and forestry per unit of raw material supplied.

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European Energy Security Framework

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On 18/03, Gas Infrastructure Europe (GIE) published a study addressing the EU Energy Security Framework. The study provides recommendations on risk assessments, the infrastructure including underground storage and supply standards, while demonstrating the value of gas storage for seasonal needs and supply security in 2040.

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Annual renewable gas injection into the gas networks

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Renewable gases like biomethane make an indispensable contribution to the energy transition. They can be easily injected into natural gas grids. In this way sustainable and secure molecules can be transported to industry and households without significant infrastructure investments. In this 2026 yearly report mandated by Regulation 2024/1789, ENTSOG shows that such renewable gas injections have increased from 38.1TWh to 43.2TWh (approximately 4.3bcm) over the last two gas years, meaning an annual increase of 12%. The reasons for this increase are new biomethane plants coming online, while in other cases already operational biomethane plants reached their nominal capacity over time, producing and injecting more biomethane into the EU's gas grids. For this report, all relevant ENTSOG members were requested to supply data on injections of biomethane and renewable hydrogen into their Member States' gas networks for the given period. This includes data from both relevant DSO and TSO grid injections of Germany, Italy, Denmark, The Netherlands and France.

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GRDF: European overview of biomethane – A market is taking shape

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The European biomethane market is gaining momentum driven by climate policies and the energy crisis. A study by GRDF highlights contrasting trends and an increase in cross-border trade. Biomethane is emerging as a key driver of decarbonization in Europe, supported by strengthened climate targets at a time when issues of energy sovereignty are taking center stage. According to the latest European overview of biomethane markets published by GRDF, production has doubled in five years to reach over 56 TWh in 2024, with the United Kingdom, France, and Italy recording the sharpest increases in production. The gradual integration of the European market is driving an intensification of biomethane flows between countries. Approximately 15% of volumes were already being traded in 2022, with an upward trend. Guarantees of Origin (GOs) are circulating more widely, supported by interconnected registries such as ERGaR. Trading exceeded 4 TWh in 2025. Flows are primarily directed toward Germany and Switzerland, where the value-added potential is high.

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Short guide to the Union Database

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The European Biogas Association (EBA) has published a new leaflet providing a clear and concise introduction to the Union Database (UDB). The UDB is an EU wide IT platform, that is being developed by the European Commission as a unified database to trace all liquid and gaseous fuels that have been certified as sustainable according to EU legislation. With its expected launch now pushed to the end of 2026, the UDB will be crucial for meeting climate goals and ensuring the

integrity of renewable fuel claims and sets out different roles and responsibilities depending on the type of actor you are. This guide will help you understand what is it, what does it mean for you and what sort of data each actor will need to report.

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Germany: 2025 Biogas statistics

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In March, the German Biogas Association (FvB) published the new figures on biogas production and consumption in Germany, with the analysis based on a completely new dataset. To this end, a comprehensive analysis of the Market Master Data Register (MaStR) was conducted with the support of the Fraunhofer Institute. According to this, by the end of 2025, 9,315 biogas plants for on-site power generation were in operation, as well as 290 plants with biomethane processing. In total, Germany has an installed electrical capacity of 6,816 MWel with a rated capacity of 3,316 MWel. The biomethane plants have a raw gas processing capacity of 309,239 Nm³/h, which generated approximately 12.8 TWh of biomethane. The biogas is used as follows: fuel 5.60 TWh; heat 1.07 TWh; electricity 8.59 TWh; other uses (emissions trading, export, etc.) 1.04 TWh.

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Valuable support: Alder's Bioeconomy Lexicon

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Early May, Alder Bioinsight uploaded its very own Bioeconomy Lexicon. During their long experience in the biomass sector, they have frequently encountered challenges brought about by inconsistent or unclear terminology. To help address this moving forward and to create strong outcomes within their work, they decided to create a comprehensive Bioeconomy Lexicon. They have been working on this project for over a year - it includes over 200 widely used terms, clearly defining each of them and providing advice regarding their use. This is also an interactive tool, allowing users to suggest terms they would like to see included.

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Domestic biomethane can make Switzerland more self-sufficient

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By making smart use of biomass, Switzerland could meet a substantial portion of its own gas needs. This is the finding of a study led by the Paul Scherrer Institute (PSI). The new study examined in detail the potential of biomass—such as wood, sewage sludge, and green waste—to replace fossil gas and thus reduce emissions of climate-damaging carbon dioxide. According to the study, the use of wood gasifiers, biogas plants, and similar facilities could reduce Swiss natural gas consumption by a factor of three to five. Complete self-sufficiency in gas cannot be achieved, but today's extreme dependence could be significantly reduced. According to the study, two steps would be necessary to achieve this. First, the energy system would generally need to be shifted more toward efficient electrical technologies, such as heat pumps. This alone would significantly reduce gas demand. And second, as much biomethane as possible should be produced from biomass.

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Biogases: Europe's overlooked path to energy independence?

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Guidehouse on behalf of the EBA recently published an update on the biogas production and potential in Europe. In 2022, the European Commission established a political target in the

REPowerEU plan to produce 35 billion cubic meters (bcm) of biomethane annually by 2030 in the EU. Despite progress since 2022, current developments show that the EU is not on track to meet this target, although the underlying potential in Europe is sufficient to meet the target. In 2024, Europe produced 5 bcm of grid-quality biomethane and 17 bcm of biogas for combined heat and power. The total potential of biomethane and e-methane in 2030, assessed in this study, is 34-35 bcm/year. Thermal gasification is no longer considered to be close enough to commercialization to make a material contribution towards the potential in 2030. However, both thermal gasification and e-methane are set to become relevant in the 2040 timeframe and beyond with an assessed range of 116-132 bcm/year in 2040 and 181-205 bcm/year in 2050.

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Biogas creates power for millions of US homes

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This month's ABC Data Digest LITE looks at those U.S. biogas systems which use the biogas they capture to generate power in the form of electricity and/or heat for on-site use or for export to the grid. There are almost 2,600 biogas capture facilities operating in the U.S. today, with 1,450 producing electricity. Most of these biogas-to-power projects are found in the wastewater sector which has over 930 plants in total - representing 75% of the 1,241 wastewater resource recovery facilities (WRRFs) that incorporate anaerobic digestion into their municipal sewage biosolids recycling process.

Looking at other feedstocks, biogas-to-power is the primary end-use of biogas captured at 73% of landfill gas facilities, 34% of farm-based biogas capture facilities and 27% of facilities which have food waste as their primary feedstock.

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CO2 capture from biomass can make a significant contribution to climate neutrality

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A new study on the economic viability of CO2 capture from biomass of Hauptstadtbüro Bioenergie shows that bioenergy plants in Germany have significant potential for so-called negative emissions. Technologies such as BECCS and BECCU could play an important role in offsetting remaining greenhouse gas emissions. The study analyzed the costs of CO2 capture from gaseous, liquid, and solid biomass. The lowest costs are incurred by plants using liquid biomass (bioethanol), at around 60 euros per ton of CO2, since the CO2 is already present in high concentrations. For biogas and biomethane plants, the costs are about 117 euros per ton, and for solid biomass, i.e., wood energy plants, they are around 119 euros per ton of CO2. The study identifies energy requirements as the primary cost driver. The potential for CO2 capture is considerable: existing bioenergy plants could capture 13.1 million tons of CO2 per year, and with further expansion, up to 30 million tons annually.

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Worldwide Bioenergy Review

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The narrative of "livestock waste disposal" is gradually being replaced by the concept of "energy recovery". In February, Alder reviewed several landmark projects that demonstrate the global deployment of energy projects utilising animal wastes. In Penang, Malaysia, the Kampung Valdor Centralised Biogas Facility is already demonstrating what scaled, professionally managed livestock

waste-to-energy can deliver in practice. Serving 20 pig farms with around 30,000 pigs, the plant processes roughly 132 tons of pig waste per day and has produced up to 0.6 MW of power under intermittent operation, with a design capacity of 1.2 MW and about 1 MW available for export to the national grid. The privately financed, £4.9 million investment has created skilled jobs, reduced odor, and improved the local environment. In Vietnam, supported by the Australian Government and implemented by Netherlands Development Organisation (SNV), had by end-2024 installed 120 biogas generators at 98 farms across 24 provinces, processing more than 3.2 million tonnes of livestock waste per year and generating over 16,800 MWh of clean electricity. In South Korea the Ministry of Agriculture, Food and Rural Affairs has finalised a comprehensive plan to convert up to 1.18 million tons of livestock manure per year into biogas by 2030 - generating enough electricity for 38,000 households and cutting greenhouse gas emissions by 500,000 tons per year.

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