

ACTIVITY REPORT
2023



About the EBA

The EBA believes wholeheartedly in the potential of renewable gases in Europe. Founded in February 2009, the association is committed to the expansion of sustainable biogases production and use across the continent. EBA counts on a well-established network of 300 national associations, research bodies and companies active in the biogases value chain throughout Europe and further afield.

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Imprint

Date: January 2024
Author: EBA Secretariat
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Design: Pif.agency

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Page 11: Canva
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EBA MILESTONES IN 2023

January

- Processing of bioplastics in biogas production

February

- European Parliament calls for 35 bcm biomethane production target
- Monetising biomethane's whole-system benefits
- European Commission proposal for CO₂ emission standards for trucks and vans

March

- Revision of the **Energy Performance of Buildings Directive**
- Recognition of biomethane among the strategic technologies in the **Net-Zero Industrial Act**
- The role of biogases in **energy system integration**
- Provisional political deal of **45% RES target** in the Renewable Energy Directive

April

- Design, build, and monitor biogas and biomethane plants to **slash methane emissions**
- The role of biogases in **regenerative agriculture**

May

- New record** for biomethane production in Europe (*Biomethane Map 2022-2023*)
- EBA General Assembly
- Using biomethane to **reduce GHG emissions in transport**

June

- €18 billion investment** already secured to scale-up biomethane production
- Decarbonising Europe's hydrogen production with **biohydrogen**



July

 Regulation on the deployment of **Alternative Fuel Infrastructure and the FuelEU Maritime Regulation**






August

 **Countdown to 2030: from targets to actions**
(preparation of the European Biomethane Week)

September

 Recognition of **renewable fuels' long-term contribution** to the decarbonisation of the sector


October

-  The use of **biogases in industry**
-  Recognition of the need to introduce a **Carbon Correction Factor**, helping reduce CO₂ emissions and mitigate climate change
-  ENVI Committee overlooks the **contribution of renewable fuels** to the decarbonisation of the transport sector
-  **Industry shows commitment** to delivering the 35 bcm biomethane target by 2030 *(European Biomethane Week)*
-  **Biogases 8-point plan** for a resilient and climate-neutral EU


 The uses of biogases in the **heating sector**

 Biogases excluded from the **Net Zero Industry Act**

 European Biogas Association to support the global **GHG Protocol** in developing rules for the reporting of biomethane purchases

 5 well-spent years: EU project **Nutri2Cycle** comes to an end

November

 Invitation to **open dialogue** on biomethane targets and sustainable practices

December

 **Tracking biogas and biomethane deployment across Europe**
(EBA Statistical Report 2023)

-  Publications
-  Policy
-  Event

A GROWING SHARE OF BIOGASES

21

bcm of biogases produced in Europe, more than Poland's entire inland natural gas demand



4.2

bcm of biomethane produced in Europe in 2022, with

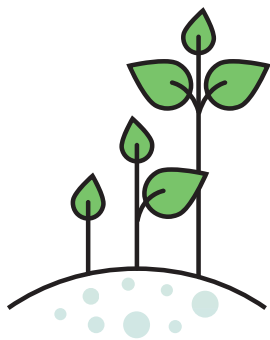
4.5

bcm of installed capacity

Potential to replace

15%

of nitrogen-based fertilisers in the EU with 2022 digestate production



230,000

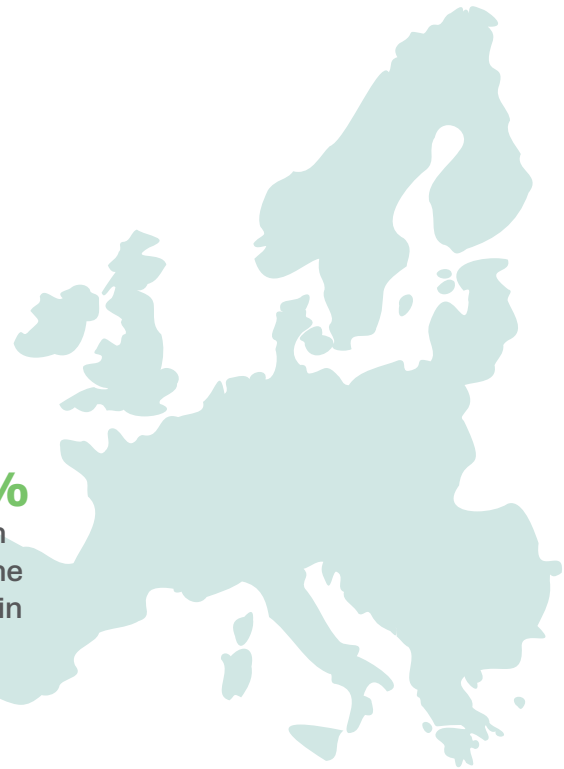
green jobs in Europe

20%

increase in biomethane produced in

24

countries



Balanced distribution across end-uses:

22%

in buildings

14%

in industry



19%

in transport

15%

in power generation

Monitoring growth and competitiveness with data-driven publications

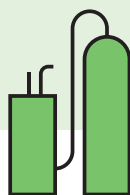
New record for biomethane production in Europe

The 2022–23 edition of the Biomethane Map showcases the most recent available data on Europe's biomethane plants. It was produced by the European Biogas Association (EBA) and Gas Infrastructure Europe (GIE).

Zoom in on the facts and figures:

> 1,300

biomethane-producing facilities in Europe



299

new plants between 2021 and 2023, representing an increase of nearly

30%



1,174

plants out of the 1,322 reported were located by the EBA and displayed on the map



Monetising biomethane's whole-system benefits

The report *Beyond energy: monetising biomethane's whole-system benefits*, produced by Guidehouse, quantified the added societal value of biomethane, beyond renewable energy provision.

Zoom in on the facts and figures:

By 2030, the whole-system benefits of biomethane production in the EU27 + the UK could range from

38–78€

billion per year



Energy security, job creation and biogenic CO₂ provide the most benefit, accounting for

> 80%

of the total

Secure investments to scale-up the sector

EBA presented its first investment outlook for biomethane, based on a partial response from the investors and project developers within the association. This outlook will be updated regularly, integrating more data and highlighting additional investment.

Zoom in on the facts and figures:



EU ADVOCACY



70

meetings with
policy makers



10



policy fora and
hearings



9

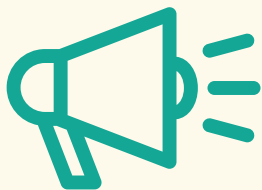
position papers

25

joint letters and
statements



13



public
consultations

20

policy briefs



FOCUS ON TECH AND INNOVATION

Evidence-based research

Tackling methane emissions at biogas plants

Fugitive methane emissions are responsible for approximately 12% of total greenhouse gas emissions in the EU. EBA conducted a review of methane emissions originating from anaerobic digestion (AD) plants, in order to support and advise the industry, European policymakers, and AD operators. The biogas industry is already advanced in developing strategies to mitigate fugitive methane emissions.



Insights:

Case study: Denmark

In Denmark, where a monitoring and mitigation programme is in place, the average methane emission rate of biogas plants is estimated at $1.31 \pm 0.16\%$.



The most cost-effective steps to reduce methane emissions at AD plants include:

- ✓ Regular self-inspections
- ✓ Periodic reporting as part of monitoring programmes
- ✓ Training for plant operators
- ✓ More research to boost technological development
- ✓ Targeted policies

Exclusive content for EBA members

Curious to know more about policy frameworks and market dynamics in European countries? Check our members-only publications:

- Support schemes analyses for France, Denmark, Finland, Belgium (Flanders), Italy, Latvia, Hungary, and Poland.
- EBA policy dashboard including maps and visuals to track policy developments in each country and pool information and resources.



Decarbonising Europe's hydrogen production with biohydrogen

EBA launched a white paper on the sustainability, affordability and accessibility of biohydrogen, aiming to support its production and use in Europe. Biohydrogen, a type of green hydrogen derived or produced from biogases and biomass, is well placed to help sectors with limited decarbonisation options achieve carbon neutrality.



- Over 95% of European hydrogen production capacity in 2020 was derived from fossil fuels, whereas green hydrogen production represented less than 1%.
- Biohydrogen can produce zero emissions or even be carbon negative
→ **-26.5 to 10.8 kg CO₂/ kg H₂ carbon footprint of biohydrogen**
- Biohydrogen can be obtained at a lower production cost than other types of green hydrogen
→ **1.15 to 9.65 €/kg H₂ biohydrogen production cost**



Involvement in collaborative projects

ALFA

Scaling up the market uptake of renewable energy systems by unlocking the biogas potential of agriculture and livestock farming.

Project duration:
November 2022 – October 2025

This year, the ALFA project interviewed 20 successful cases in renewable energy and livestock farming, focussing on 7 ALFA hub countries. These cases involve biogas plants on livestock farms as well as some additional agricultural renewable energy projects. The project also organised six workshops to share ideas and solutions to challenges that farmers face in establishing biogas plants.

Biomethaverse

Demonstrating and connecting production innovations in the biomethane universe.

Project duration:
October 2022 – March 2027

One year after the launch of the project, the framework to support the implementation of innovative biomethane pathways in 5 European countries is already in place, with the 'Implementation Activity Plan' (led by EBA) guiding the execution of the demonstration activities and the 'Evaluation Framework and Data Collection Strategy' equipping demo sites with a solid procedural structure to support operations.

ēQATOR

Building biogas reactors to make cleaner synthetic fuels.

Project duration:
June 2022 – November 2025

ēQATOR aims to develop catalytic reactor technologies that will convert biogas into syngas efficiently and sustainably. This year, ēQATOR's partners produced the first ceramic prototypes for the project's reactor and catalyst, and made the first attempts to create a microwave-heated in-situ mass analyser.

FER-PLAY

Facilitating the uptake of alternative fertilisers.

Project duration:
September 2022 – September 2025

One year into the project, the consortium has established a database presenting 61 different value chains for circular fertiliser production, and selected the 7 most promising ones for further assessment.

GreenMeUp

Green Biomethane Market Uptake.

Project duration:
August 2022 – July 2025

In 2023, GreenMeUp published a number of factsheets about the biomethane policy framework and market dynamics in 5 target countries. The project also organised two workshops to accelerate research, innovation and the industry uptake of biomethane technologies in the EU.

TITAN

Direct conversion of biogas to green H2 and carbon materials using a scalable, microwave-heated catalytic reactor.

Project duration:
September 2022 – September 2026

In the project's first year, the TITAN consortium has completed the setup of the microwave reactor that will be used to test the direct conversion of biogas into valuable carbon materials and biohydrogen-rich stream. The project partners, lead by EBA, carried out market mapping and examined impact pathways, as well as completing a comprehensive review of opportunities and barriers for the deployment of the TITAN technology within the European policy framework.

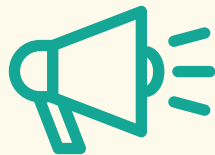


STRATEGIC IMPACT AND VISIBILITY



112,000
website visitors

28,077
social media followers



17
press releases

7
publications



3,666
newsletter
subscribers

54
external events



4
EBA events with a total of
1,500
participants



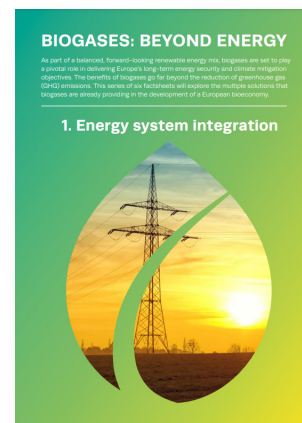
Spotlight campaign: 'Biogases: beyond energy'

During 2023, 'Biogases: beyond energy' explored in 5 factsheets the multiple solutions that biogases are providing in the development of a European bioeconomy.

Energy system integration

Biogas and biomethane are an important source of flexibility in the energy system. They contribute to all energy outputs – electricity, heat and transport – and can support the further integration of variable renewables via three main pathways.

1. Cogeneration or combined heat and power systems (CHP)
2. Bio-methanation
3. Biogas upgrading to biomethane



Regenerative agriculture

Biogas production has a positive environmental impact when combined with regenerative agriculture, which is vital to the development of an adaptative and sustainable food system. This helps:

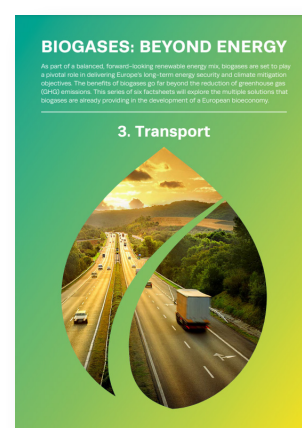
1. mitigate greenhouse gas emissions and nitrate leaching
2. convert feedstocks into valuable assets, namely renewable energy and digestate
3. provide consumers with quality food



Transport

Biomethane is a sustainable and cost-competitive substitute for fossil fuels, representing one of the few readily available fossil fuel alternatives for long distance and energy intensive transport segments.

1. 100% of the EU gas network is compatible with biomethane
2. A vehicle running on 40% biomethane mixed with natural gas can reduce its CO₂ emissions by 55% (Well-to-Wheel/ Wake methodology)
3. +4,100 Bio-CNG filling stations in 2023
4. +650 Bio-LNG filling stations in 2023



Heating

Biogases can provide households and tertiary buildings with renewable and cost-competitive heat, which is essential to support the transition to a carbon neutral building stock.

1. Once injected into gas grids, biomethane can fuel end-use appliances such as highly efficient gas boilers and gas or hybrid heat pumps.
2. Central combined heat and power generation units can be run on biomethane and provide heat through a district heating network.
3. In rural areas not connected to existing gas networks, raw biogas can directly generate heat to be distributed through a district heating network.



Industrial uses

Biogas and biomethane are a cost-effective solution for the decarbonisation of EU industries. Their benefits go far beyond the reduction of greenhouse gas emissions and can be applied to different end uses in the industry, transport and buildings sectors. The versatility of biomethane is reflected in its balanced distribution pattern across end uses:

- 28% for buildings
- 18% for industry
- 16% for transport
- 16% for power generation

5

Stay tuned! The factsheet 6 on Sustainability is coming beginning of 2024 !

EUROPEAN BIOMETHANE WEEK

'COUNTDOWN TO 2030:
FROM TARGETS TO ACTION!'



620
attendees

22

industry supporters
and exhibitors



10

side-events



Biogases billboard
campaign in Brussels
airport and metro
stations with

2.128.106
views



EUROPEAN
BIOMETHANE
WEEK

49

speakers



Get ready for
the 2nd European Biomethane Week
from 21 to 25 October 2024!

EBA PEOPLE

Brussels Office



Harmen Dekker
CEO



Giulia Laura Cancian
Secretary General



Anthony Lorin
Policy Officer



Anna Venturini
Policy Officer



Florence Goarin
Policy Officer



Lucile Sever
Policy Officer



Chiara Gaffuri
Policy Assistant



Mieke Decorte
*Technical and Project
Manager*



Marina Pasteris
*Technical and Project
Officer*



Gabriella Papa
*Technical and Project
Officer*



George Osei Owusu
*Technical and Project
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Angela Sainz Arnau
*Communications
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Fanny Lamon
Communications Officer



Ana Pérez
Events Manager



Rachelle Hajjar
*Communications and
Events Advisor*



Natalia Walczak
Corporate relations



Vinciane Perot
Executive Assistant

Executive Bodies



Anders Mathiasson
*President
Sweden*



Michael Niederbacher
*Vice-President and CAC
Chairman - Italy*



Piero Gattoni
Vice-President - Italy



Prof. Erik Meers
*Executive Board
Member and SAC
Chairman - Belgium*



Philipp Lukas
*Executive Board
Member - UK*



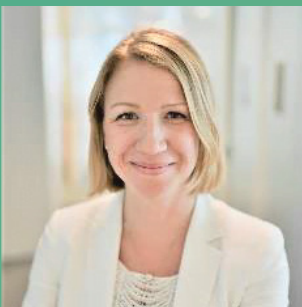
Stefan Rauh
*Executive Board
Member - Germany*



Niels Peters
*Executive Board
Member
- The Netherlands*



Gregory Krupnikovs
*Executive Board
Member - UK*



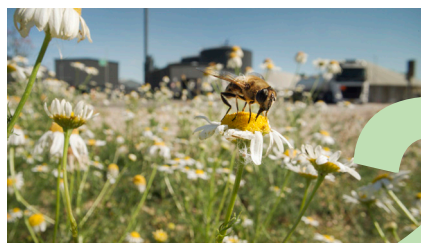
Marta Kamola-Martines
Board Member - France

MEMBER CARE

Overview of working groups



1 Sustainability WG deals with matters such as certification, requirements (GHG emissions savings, default values, sourcing policy, competing uses and cascading), methane emissions, negative emissions (BioCCUS).



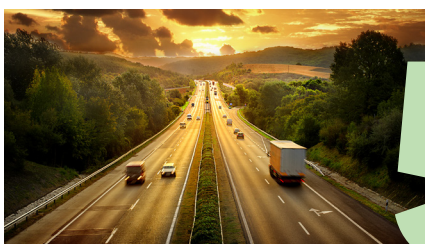
2 Circular economy WG aims to develop a common understanding of the ways in which renewable gases from agricultural biomass, wastewater and other secondary raw materials can bring real benefits to the climate and environment. It also deals with nutrient recovery and the use of digestate.



3 Competitiveness WG focuses on understanding how different supportive market mechanisms work together in supporting investment in biogas and biomethane. It also considers which combinations of mechanism are most successful in achieving significant development of renewable gases. It also covers permitting, financing, and renewable gas trading.



4 Technology and innovation WG focuses on topics related to gasification technologies, bio-hydrogen production, bioCO₂ valorisation, and manufacturing.



5 Transport WG deals with general topics concerning the increase of biomethane use in transport, including the growing need for Bio-LNG for transport and HDV and related issues.



6 Energy and industry WG considers biogas and biomethane end uses (heat and industrial processes) and energy system integration.

Key member services

High-level advocacy for dramatic results: presenting the biogases value chain to EU and national policy makers.

Thorough market intelligence: in-depth assessments of the state of biogases in Europe.

Privileged information exchange: high-level events with policymakers, academics and key industries active in the biogases value chain.

In-depth policy analysis: regular updates on the latest policy developments in a wide range of topics (policy newsletter).

Push for innovation: boosting the deployment of biogases through solid scientific evidence and cutting-edge research.

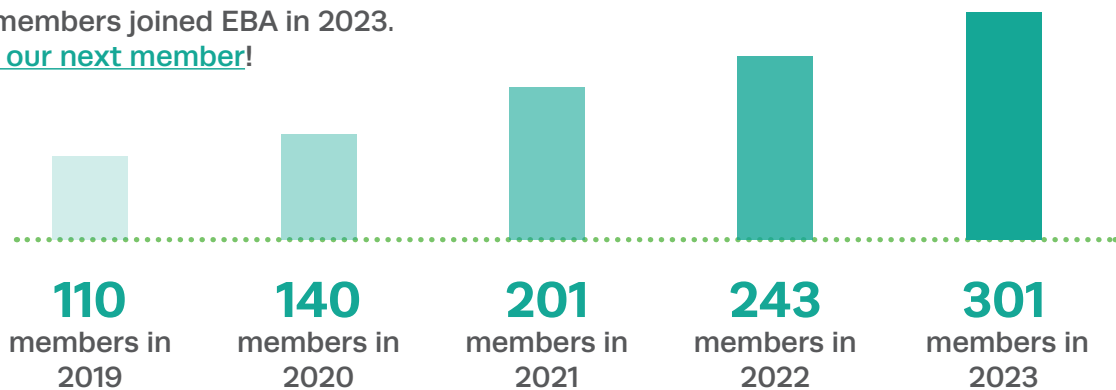
Exclusive visibility and networking opportunities: access to an extensive network of nearly 8,000 stakeholders in Europe and beyond.



Join our growing community

76 new members joined EBA in 2023.

[Become our next member!](#)



Get an overview of all EBA members!





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