

Activity Report 2021



EBA
European Biogas
Association

About the EBA

The EBA is the voice of renewable gas in Europe. Founded in February 2009, the association is committed to the active promotion of the deployment of sustainable biogas and biomethane production and use throughout the continent. EBA counts today on a well established network of 42 national organisations and over 150 scientific institutes and companies from Europe and beyond.

Imprint

Date: January 2022
Copyright:
© 2022 EBA

Contact

European Biogas Association
Renewable Energy House
Rue d'Arlon 63-65
B – 1040 Brussels (Belgium)
info@europeanbiogas.eu
T. +32 24 00 10 8

Authors

Ángela Sainz Arnau, Fanny Lamon,
Harmen Dekker, Anthony Lorin,
Marco Giacomazzi, Mieke Decorte

Design

Ángela Sainz Arnau
Fanny Lamon

Table of content

Foreword	4
A first glance into 2021	6
A bird's eye view of 2021	8
Key figures for our sector	10
Advocating for renewable gas	12
Summary of our communications	14
Publications	16
The next wave of renewable gas	18
Who is who at the EBA	20
The EBA network	22

Foreword



By Piero Gattoni
EBA President



Biogas and biomethane are being increasingly recognised by the EU institutions and Member States as key actors in the future energy mix and enablers of a more sustainable and efficient agriculture. Although more efforts are needed to achieve full recognition, some of the requirements of our sector are now addressed in key pieces of EU legislation, including the Taxonomy of sustainable activities, the Communication on Sustainable Carbon Cycles and the Gas Package. The EBA has also completed a comprehensive analysis of the impact of the Fit for 55 package and has advocated strongly for the adoption of a lifecycle approach in the CO2 standards regulations. As a result of this, our industry has increased its engagement with high-level representatives from the European institutions, including Energy Commissioner Kadri Simson and the Cabinet of Vice-President Frans Timmermans. We have also strengthened our strategic partnerships with bodies such as the bio-LNG coalition, the European Net Zero Alliance and the Gas for Climate consortium; Gas for Climate played an important role in supporting the launch of the Biomethane Declaration.

The active involvement of EBA members in our internal working groups has been reflected in a range of publications highlighting the sustainable performance of the biogas and biomethane sector in the move towards a green economy and the achievement of net-zero by 2050. 'The role of biogas production from industrial wastewaters in reaching climate neutrality by 2050', put together in collaboration with the EBA's Wastewater working group, showed the potential of biogas production from industrial wastewater to reduce methane emissions. The paper, 'Gasification: a sustainable technology for circular cities', produced on the initiative of the EBA's Gasification working group, demonstrated the substantial potential of gasification technologies to accelerate the net-zero contributions of the European waste, energy, hydrogen, and biofuel markets. The EBA's Transport working group published the paper 'Smart CO2 standards for negative emissions mobility', which includes three key recommendations to ensure the deployment of biomethane in transport and consequently achieve a fast, cost-effective shift to carbon neutral mobility in Europe by 2050.

2021 also saw the launch of the EBA's new visual identity, more in line with the current positioning of the sector at the core of our future energy system and with its commitment to shaping our circular bioeconomy. The successful European Biogas Conference 2021, which took place in person with over 200 participants, has proved that the sector is ready to support the EU transition towards climate neutrality. This conference comprehensively showcased the many ways and the numerous sectors (industry, transport, buildings) in which biogas and biomethane can offer a decarbonisation solution. It also demonstrated the role of biogas and biomethane in shaping the circular bioeconomy of the future.

All the changes that we see today are the result of the committed work carried out by EBA members and sector representatives, including the late **Harm Grobrügge**, who passed away last year. Harm was a pioneering biogas producer who developed his own farm in the early 80s and believed in the strength of a united and consolidated European biogas sector. As one of the founding fathers of the EBA over 10 years ago, he defended and supported the association whole-heartedly in the face of many challenges. The EBA Team and Board will work together to build on his valuable legacy and make sure the sector can continue to flourish in the years to come.

I would like to thank all EBA members for their important and continued support in helping us to strengthen our sector. We look forward to the opportunities that 2022 will bring!



**A first glance
into 2021**

2021 saw the development of exciting opportunities for the renewable gas sector. **Today, our sector represents stakeholders from the entire biogas and biomethane value chain. 65 new members joined the EBA in 2021** and now contribute actively to the further deployment of biomethane and biogas. This growth has significantly strengthened the EBA's voice in discussions with the EU institutions and in engagement with key stakeholders in all areas pertaining to biogas and biomethane production and use. On the 7th of December 2021, the EBA supported the presentation of the Biomethane Declaration, initiated by the Gas for Climate consortium, to the Commissioner for Energy Kadri Simson.

The huge potential of the renewable gas sector becomes more apparent year after year. According to the data collected by the technical team to produce the EBA Statistical Report 2021, combined biogas and biomethane production in Europe in 2020 amounted to 191 TWh of energy and this figure is expected to double in the next 9 years. **Projections suggest production could increase at least fivefold by 2050, reaching over 1,000 TWh, with some estimates going as high as 1,700 TWh.** By then, the EBA estimates that biogas and biomethane production will be able to meet 30–40% of the total EU gas demand.

There is still much work to be done to support the role of biogas and biomethane in Europe. **In 2022, the EBA will focus on the scalability and cost-competitiveness of biomethane, including the monetisation of its positive externalities, such as its contribution to the agroecological transition.** Biomethane is the most cost-effective, scalable and sustainable renewable gas available today. However, it is still too often perceived as not cost competitive relative to most fossil energy carriers. In 2022, particular emphasis will be placed on building new synergies with other sectors, as well as on coordinating our actions with all our members, notably our national associations, in order to align priorities and reach key national policymakers.

Our office in Brussels has already grown to accommodate the increased policy, technical and communication priorities of the EBA in these crucial months and years for our sector. **The enlargement of the team is expected to continue in 2022, including among other appointments the replacement of Susanna Pflüger, former Secretary General of the EBA.** Over the last 10 years, Susanna has passionately contributed to the growth of the biogas sector with her thorough knowledge of the relevant EU legislation and continuous discussions with policymakers and other key stakeholders across Europe.

The outlook for 2022 is strong, although much work remains to be done. In 2022, the EBA will continue to make every effort to ensure that the needs of our industry across Europe are met and issues are addressed.



By Harmen Dekker
EBA Director

A bird's eye view of 2021...

JANUARY

- EBA Statistical Report 2020
- EU Parliament vote on 'New Circular Economy Action Plan'
- Gas for Climate paper proposes binding target for 11% renewable gas consumption

FEBRUARY

- 2nd Biogas Lab webinar
- 'EU industry Days' campaign on social media

JULY

- EBA reaction to the 'Fit for 55' package

JUNE

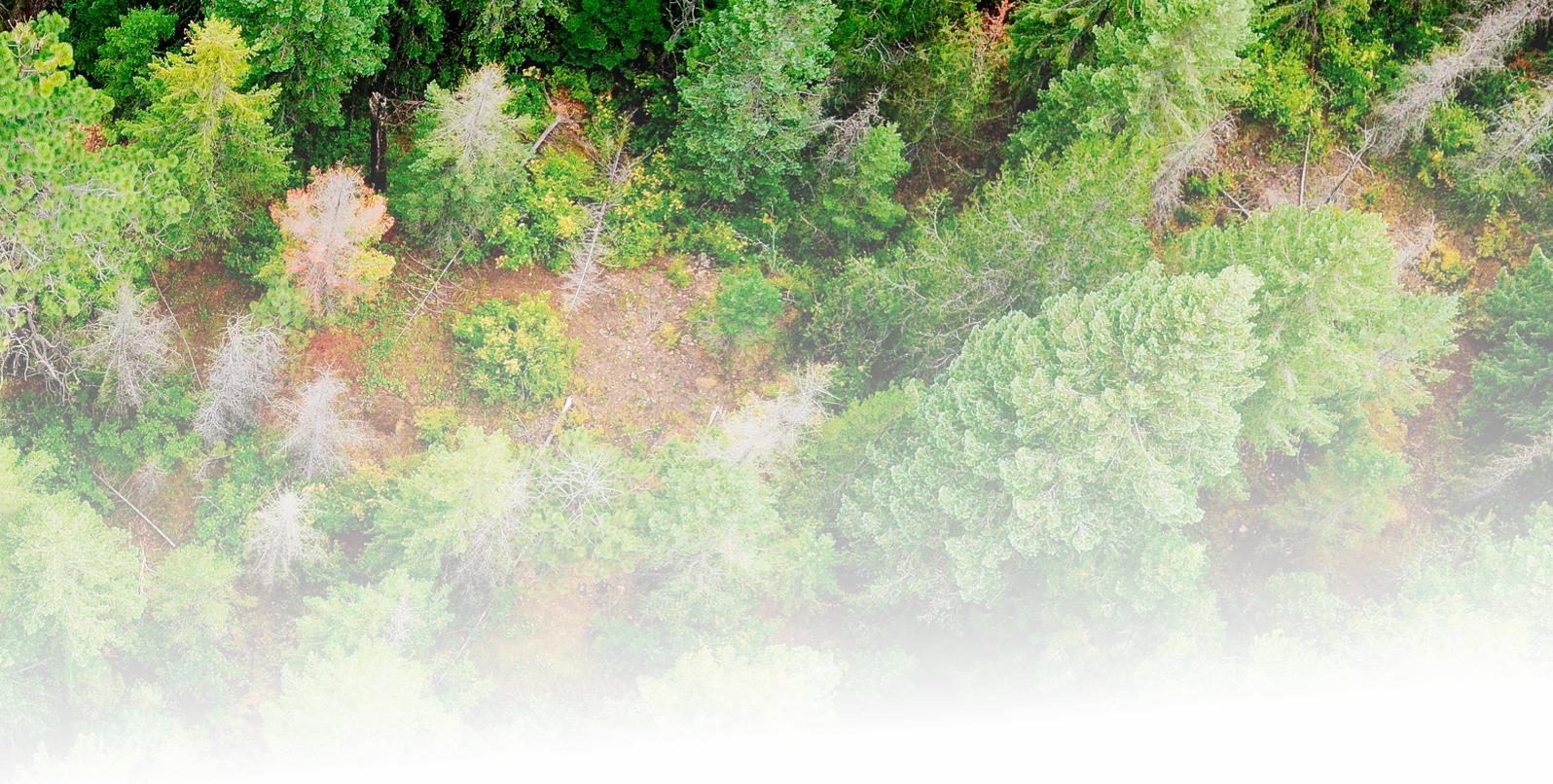
- EU Green Week Event: Pollution Free Farms with 'Below zero emissions for clean mobility'
- EBA paper on emissions standards in transport
- 3rd Biogas Lab webinar

SEPTEMBER

- 4th Biogas Lab webinar

OCTOBER

- European Biogas Conference
- New visual identity of the EBA
- Reaction from the biogas sector to the increase in EU gas prices
- Publication of the paper 'The Role of Sequential Cropping and Biogasdoneright™'



MARCH

- Appointment of Olivier Aubert at EBA Executive Board
- Appointment of Matthias Kerner at EBA Company Advisory Board
- EBA joins the European Net Zero Alliance (ENZA)

APRIL

- MEPs call for removal of barriers to deployment of sustainable fuels
- EBA paper on biogas production from industrial wastewaters
- Biogas is granted access to sustainable finance

MAY

nts 'Zero
n Biogas' and
ns pathway

- EBA General Assembly 2021

ion
ort
nar

NOVEMBER

- 1st overview of European biogas and gasification technologies
- EBA Statistical Report 2021 highlights biomethane ramp-up
- EBA paper proves potential of gasification to scale-up

DECEMBER

- 28 organisations present Biomethane Declaration
- European Commission presents Gas Package and 'Communication on Sustainable Carbon Cycles'
- Gas for Climate 'Market State and Trends Report 2021'

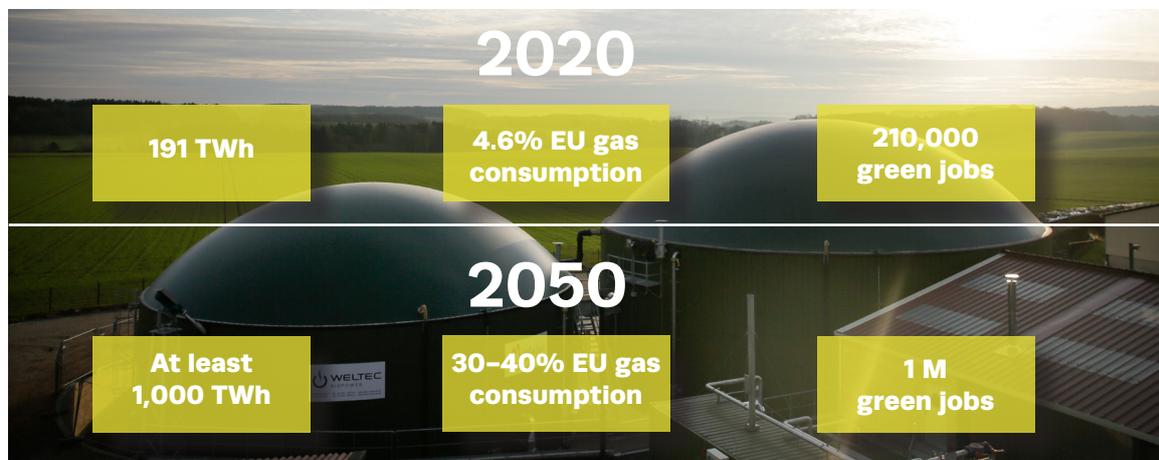
Key figures for our sector

- EBA Statistical Report 2021
- Biomethane Map 2021

Monitoring the deployment of biogas and biomethane across Europe is essential to assess the challenges and harness the opportunities of our industry in the coming years. The key figures for our sector are summarised in 2 EBA publications:

EBA Statistical Report 2021

The EBA Statistical Report analyses the current availability of renewable gases in Europe, notably biogas and biomethane. **Combined biogas and biomethane production in Europe in 2020 amounted to 191 TWh or 18.0 bcm of energy and this figure is expected to double in the next 9 years. The potential is there for production to increase at least fivefold by 2050, reaching over 1,000 TWh, with some estimates going reaching as high as 1,700 TWh. This would represent 30 to 40% of total EU gas consumption.** Agriculture-based biogas and biomethane plants contribute the lion's share of the total European biogas and biomethane production, which is already more than the entire natural gas consumption of Belgium and represents 4.6 % of the gas consumption of the European Union. In terms of job creation, the report shows that the biogas and biomethane industries are today responsible for over 210,000 green jobs. **Both sectors combined can be expected to create a total of approximately 420,000 jobs by 2030 and over one million jobs by 2050.** The report also highlights the **necessary future collaboration between the biomethane industry and producers of the other potential major renewable gases, such as green hydrogen.**



Biomethane Map 2021

Today, Europe has around 20,000 units in operation (total number of biogas and biomethane plants). Sustainable biomethane can cover up to 30–40% of the EU gas consumption expected for 2050, with an estimated production of at least 1,000 TWh. Biomethane plants are exponentially growing across Europe: **the Biomethane Map 2021 shows that almost 300 new units started operation in the past one and a half year. Europe has today 40% more biomethane plants compared to the previous edition released in 2020.** The fast implementation of biomethane technologies will speed-up the decarbonisation of the EU economy. Yet, the sector will need relevant legislative support in the coming years to harness its full potential.



Advocating for renewable gas

- CO2 standards
- Access to green finance
- Fit for 55 Package
- Energy prices
- Sustainable carbon
- Gas decarbonisation

The EBA advocates for relevant legislative support to ensure the full deployment of the biogas and biomethane industries in Europe. In 2021, we focused on:

CO2 standards

The EBA coordinated a petition signed by MEPs, calling for the removal of barriers to the deployment of sustainable fuels ensuring transport decarbonisation. **Current CO2 emission standards promote the development of green electricity but hinder the deployment of other sustainable fuels and vehicles.** The lack of policy support will put at risk the scale-up of the biogas and biomethane industry, offering the chance to decarbonise transport in a swift and cost-competitive way, leaving no one behind.

Access to green finance

Last year, the European Commission gave the **green light for biogas to access sustainable finance.** The EU Taxonomy recognises anaerobic digestion (AD) and the integration of biomethane in gas grids as sustainable activities, but jeopardises the use of biomethane in the transport sector and imposes significant restrictions on the use of renewable gas in heating systems in buildings.

Fit-for-55 Package

The Fit-for-55 package was published on 14 July 2021, to support Europe's climate policy framework and put the EU on track for a 55% reduction in carbon emissions by 2030, leading to net-zero emissions by 2050. The package is made up of thirteen cross-cutting legislative proposals, comprising eight revisions of existing regulations or directives and five new proposals, many of which will have a direct impact on the biogas and biomethane sectors. The **interconnected proposals cover climate, land use, energy, transport and taxation** and aim to bring these areas into line with the targets agreed in the European Climate Law.

Energy prices

Over the summer and in the first weeks of autumn 2021, gas and energy prices fluctuated upwards to a worrying degree. The European Commission issued an official communication in October to coordinate the Member States in managing the crisis. The EBA produced a statement addressed to all major EU policymakers, informing them as to **how the deployment of biogas and biomethane can strengthen energy security and improve the availability of nutrients for farmers.** When fossil inputs (energy and nutrients) are replaced with biomethane and digestate, the whole economic system gains capacity to resist external shocks.

Sustainable carbon

The European Commission Communication on Sustainable Carbon Cycles acknowledged **CO2 capturing and storing as necessary solutions** if Europe is to reach climate-neutrality by 2050. The communication encourages practices such as carbon farming, as well as the use of bioenergy combined with carbon capture and storage or utilisation. These practices are already being implemented by biogas and biomethane producers across Europe. The communication is therefore a positive step towards the full recognition of the environmental benefits of sustainable biogas and biomethane production.

Gas decarbonisation

In December 2021, the European Commission launched the long-awaited 'EU framework to decarbonise gas markets' to **facilitate access to existing gas markets and infrastructure for renewable and low-carbon gases.** The biogas industry welcomes the establishment of Europe-wide rules that will accelerate the integration of biomethane into the gas network after 2025. It is an important step towards the achievement of the industry's ultimate goal of 1,000 TWh/y of biomethane production by 2050. The Gas Package will ensure non discriminatory access to the gas grid for biogas producers but we call for clear, consistent definitions as well as for a higher level of ambition in terms of actions securing the reduction of greenhouse gas emissions and the necessary rapid uptake of renewable gases.

Summary of our communications



Sharing our story gives visibility to the biogas and biomethane industries across Europe and helps understand the added value of the sector in the implementation of the European bioeconomy.

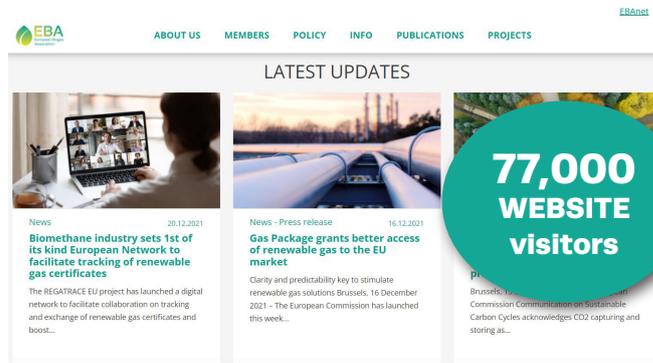
The EBA has a new visual identity!

The European Biogas Association launched its new visual identity, more in line with the current positioning of the sector at the core of our future energy system and with its commitment to shaping our circular bioeconomy. Our colours have changed from yellow to green to highlight our commitment to both renewable energy and the circular economy. Our icon represents the flame of renewable gas and a tree leaf, which is linked to the environment. Our font is now more modern and dynamic.

European Biogas Conference 2021



Engaging with a broad audience



Publications



In 2021, the EBA produced 4 publications showcasing the sustainable performance of our sector and its role in the shift towards a green economy.

The role of biogas production from industrial wastewaters in reaching climate neutrality by 2050

Last year, the EBA launched a new report providing a comprehensive analysis of the potential of biogas production from industrial wastewaters to reduce methane emissions. Compiled in collaboration with the EBA's Wastewater working group, the publication maps the opportunities to produce biogas from industrial wastewaters and quantifies the biogas production potential of different EU industry sectors. The results show that biogas has a high potential to mitigate methane emissions from wastewaters whilst at the same time providing a huge source of renewable energy. This will reduce energy consumption at wastewater treatment installations, provide a solution for the management of sludge and create additional green jobs at a local level. The paper demonstrates that it is possible to recover around 14 Mtoe (142 TWh) of biogas per year by valorising industrial wastewaters.

Smart CO2 standards for negative emissions mobility

Under the framework of the EU Green Week 2021, the European biomethane industry launched a new paper, which includes three key recommendations to ensure the deployment of biomethane in transport and consequently achieve a fast, cost-effective shift to carbon neutral mobility in Europe by 2050. Emissions from transport will need to be reduced by 90% relative to 1990. If the current trends continue, the transport sector will fail to contribute to the emissions reduction that is necessary to meet EU targets. To ensure the full decarbonisation of the transport sector, Europe needs to supplement electrification with the deployment of all alternative fuels and technologies.

Gasification: a sustainable technology for circular cities

Gasification is a highly promising technology that has already been commercialised and is ready to scale-up. Last year, the EBA launched a new paper, on the initiative of the EBA's Gasification working group, mapping the opportunities presented by gasification to build circular economies in Europe and reduce carbon emissions as part of the net-zero roadmap. By producing cleaner energy, biochar and biofuels from biomass and wastes, gasification is a key enabler in the decarbonisation of EU energy consumption. The market for the gasification of fossil, biomass and waste resources was valued at \$479bn in 2019 and is projected to reach \$901bn by 2028. The success of gasification and its capacity to scale-up to become the waste-to-energy/fuel method of choice depends on the nature and degree of the forthcoming political, policy, economic and commercial support.

The Role of Sequential Cropping and Biogasdoneright™ in Enhancing the Sustainability of Agricultural Systems

With appropriate innovations in crop management, sequential cropping (a practice currently mainly implemented in Italy) could be applied as feedstock for biomethane production in different agroclimatic regions of Europe, contributing to climate and renewable energy targets. The study conducted by Ghent University in collaboration with the EBA and Consorzio Italiano Biogas (CIB) confirms a minimum realistic biomethane potential of 46 bcm/year that could be unlocked by the anaerobic digestion of sequential crops, and a maximum potential of 185 bcm/year when using 60% of the arable land in Europe.

An aerial photograph of ocean waves breaking, with the water and foam illuminated by the warm, golden light of a sunset. The waves are moving from the top right towards the bottom left, creating a sense of motion and power. The sky is not visible, but the light is clearly from a low sun, casting long, soft shadows and highlighting the textures of the water and foam.

The next wave of renewable gas

The EBA is involved in different research and innovation projects at EU level to speed-up the scale-up of biogas and biomethane in Europe. In 2021, the EBA provided policy, technical and communication expertise to 5 projects tackling different aspects of the biogas and biomethane value chains.

DiBiCoo

Facilitating collaboration between European biogas industries & stakeholders from emerging and developing markets. www.dibicoo.org

In 2021, the EBA was actively involved in the launch of the Biogas and Gasification Match-making Platform and the Overview of Biogas and Gasification Technologies.

Regatrace

Creating an efficient trade system based on issuing and trading biomethane Guarantees of Origin (GoO). www.regatrace.eu

In 2021, the REGATRACE EU project launched a digital network to facilitate collaboration in the tracking and exchange of renewable gas certificates and boost biomethane trading across Europe.

Systemic

A roadmap to facilitate solutions for biowaste in the EU. www.systemicproject.eu

The SYSTEMIC project came to an end in 2021. Information in different formats for policy-makers, farmers or broader audiences will remain available here: www.europeanbiogas.eu/project/systemic/

Nutri2Cycle

Facilitating the transition towards a more carbon and nutrient efficient agriculture in Europe www.nutri2cycle.eu

The Nutri2Cycle project has been mapping CNP (carbon, nitrogen and phosphorus) flows in the main farming systems in Europe and has issued a report on the effects of the current legal framework on these flows.

ALG-AD

Creating value from waste nutrients by integrating algal and anaerobic digestion technology

Last year, the EBA coordinated the organisation of our Biogas Lab series of webinars with the support of the ALG-AD project.

Who is who at the EBA

- **The EBA Secretariat**
- **The EBA Board**
- **The Company Advisory Board**

The EBA Brussels Office

The EBA team works to strengthen the voice of renewable gases across Europe and raise awareness of the socio-economic and environmental benefits of biogas and biomethane.



The EBA Board 2018–2022

The Board supports the work of the EBA in promoting the potential of biogas and biomethane in the transition towards carbon neutrality and an efficient circular economy.



The EBA Company Advisory Board 2020–2022

The goal of the CAB is to provide a strategic vision to the EBA Secretariat and the Executive Board with the aim of strengthening the visibility of the sector as a cost-competitive and sustainable option for decarbonisation.



The EBA network

65 new members joined the EBA in 2021.

The EBA has now more than 190 members covering 36 countries.

6 reasons to join us!

In the coming years, our industry will be at the forefront of the deployment of renewable gas in Europe. Become an EBA member to:

1. **Join an extensive network** of national associations, companies, research institutes and other organisations operating in the renewable energy sector in Europe and beyond;
2. **See your interests supported** at EU level;
3. **Get in-depth assessments** of the state of play of the biogas and biomethane sectors in Europe;
4. **Participate in research projects** promoting the deployment of renewable gases across Europe;
5. **Meet and exchange** with high-level stakeholders involved in our sector;
6. **Enhance your visibility** through EBA strong digital presence.

"Up-to-date information is nowadays a key to success on the market. Therefore, PlanET as one of the world-leading providers of turn-key biogas solutions relies on the technical and political reports of the EBA. Information provided by the European Biogas Association is a reliable and comprehensive data source for PlanET to plan our market activity in Europe."

Jörg Meyer zu Strohe, CEO PlanET Biogas



"Air Liquide is delighted to be a member of the EBA. It reinforces our positioning, at the forefront of the biomethane industry and allows us to actively contribute, together with the other members, to the development of the biogas industry in Europe."

Alexandre Demangeon, Vice President Air Liquide Biogas Solutions



"EQTEC became a member of the EBA in 2021. After less than only a year, being part of the community has already been beneficial as we have received support, research data and insight from the EBA's communications and policy experts. We have also contributed our industry and engineering knowledge and expertise about syngas from our Advanced Gasification Technology, in the form of our content and editing input to the recently-released EBA Gasification paper. We look forward to continuing and increasing value from our membership, including joining the new biohydrogen working group in 2022. Our objective is to, together, further efforts to define EQTEC and the industry's place in the Net Zero economy across Europe."

Lisa Artemis, Head of Marketing and Communications EQTEC plc



**SCAN TO
GET AN OVERVIEW OF ALL EBA MEMBERS**





EBA
European Biogas
Association