May 2025

EBA Roadmap towards 2040: Biogases as substantial source of circular and affordable energy for Europe

As the European Commission defines its 2040 Climate Targets to balance competitiveness and decarbonisation, biogases are emerging as a cornerstone of a sustainable, circular, and energy-secure Europe. Offering a scalable, cost-effective path to reduce fossil fuel dependency and carbon emissions, biogases are at the centre of **three circular pathways**:

- **Renewable energy**: With a sustainable potential of biogases of 101 bcm in 2040 and 151 bcm in 2050 withing the EU-27, biogases will play a key role in the EU's defossilisation strategy across industry, transport, and heating, while embodying an important energy balancing solution.
- **Organic fertilisers**: By treating the residue stream, organic fertilisers are obtained, which can and must play an important role for revitalising European soils and displace carbon intensive synthetic fertilisers.[1]
- **Biogenic CO_2**: The biogases sector is one of the best available, cost-effective, safe and scalable technologies for capturing biogenic CO_2, potentially replacing 89 Mt of fossil CO_2 by 2040 in numerous EU critical industries whose production processes are heavily dependent on CO_2.[2]

Despite these clear advantages, the sector has not received the political recognition it deserves. Therefore, European Biogas Association (EBA) urges the European Commission to acknowledge the strategic importance of the sector by setting a **binding biogases target of 100 billion cubic meters (bcm) by 2040**.

To reach this goal, we call the European Commission to establish in 2025 a **European Biogases Charter** in cooperation with EBA, as the European biogases value chain representative. The European Biogases Charter should define a shared vision and enabling conditions for biogases growth and to unlock the three circular pathways, aligning Member States' actions, and coordinating deployment efforts across the sector.

To reinforce the Charter, EBA calls on Member States to publish **National Pledges for Biogases**, as public commitments that will help drive implementation and enable progress monitoring in years ahead.

EBA RECOMMENDATIONS ON THE 2040 CLIMATE TARGET

- Binding biogases target of 100 bcm by 2040
- European Biogases Charter
- National Pledges for Biogases

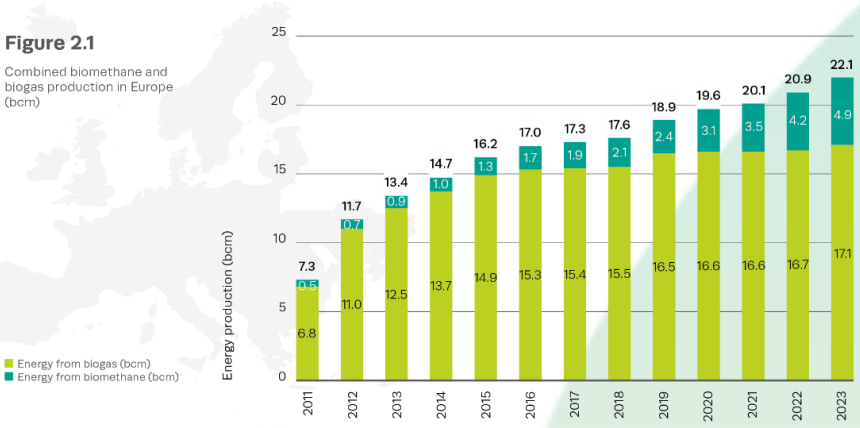
[1] As per figures provided by the European Commission, the EU imports around 40% of its nitrogen fertilisers needs.

[2] European liquid and solid CO_2 consumption in 2023 totalled circa. 8 Mt, with over 63% of demand originating from the food and beverage industry (S&P Global, 2024). In the same year, European bigas upgrading separated 6.43 Mt of biogenic CO_2. Sectors such as chemicals, cement, and e-fuels are among the key future users of CO_2, and by 2050, demand is projected to reach between 260 Mt (EC, 2021) and 320 Mt annually (CO2 Value, 2024).

Biogases are environmentally vital and economically viable, offering flexible energy generation that enhances grid stability and supports renewables integration. Importantly, replacing natural gas with biomethane leverages existing infrastructure, minimizing investment needs. Biogases strengthen regional economies, create local jobs ensuring that economic investment revolves within Europe, and reduce dependence on foreign energy, fertilisers, and CO_2 supplies, boosting Europe's long-term security and competitiveness.

Biogases 2040 targets & Charter

The biogases sector in Europe has experienced impressive growth over the past years, with a consistent 20% year-on-year increase in the last years. Currently, biogases provide 22 bcm of renewable gas to the European market, equal to 7% of EU natural gas consumption in 2023. The sector has also seen growing commitment from the industry with a total of €27 billion private investments into the biomethane sector by 2030, investment that would deliver 6.3bcm/year of biomethane capacity to Europe by 2030.



Combined biogas and biomethane production in Europe

(EBA Statistical Report 2024)

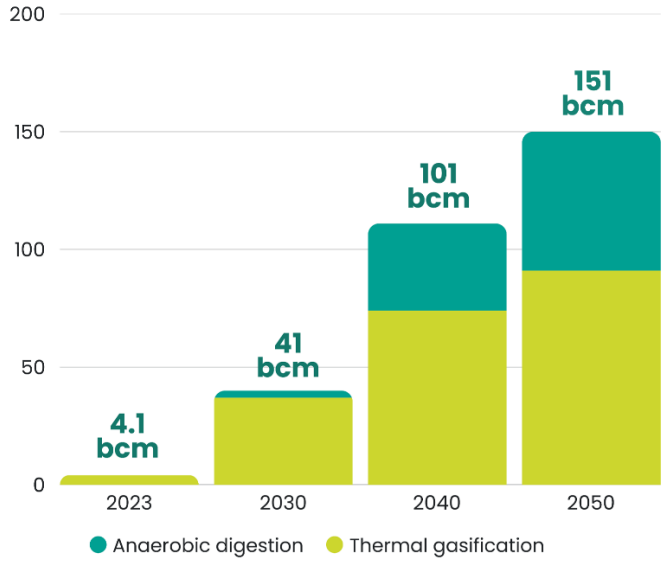
This expansion underscores the sector's potential as a cornerstone of the EU's energy transition but lags far behind the sustainable potentials which are available. Looking ahead, the prospects for European produced biogas and biomethane are highlighting its important potential role it can play. By 2040, the EU could produce as much as 101 bcm annually, with this figure expected to rise to at least 150 bcm by 2050.

We welcome the Commission's latest ambition presented in the REPowerEU Roadmap to phase out fossil natural gas by strengthening the local production of biogas and biomethane. However, this ambition has yet to be cemented through binding legislation.

EBA is committed to support the European Commission in its proposal for a 90% greenhouse gas (GHG) emission savings target for by 2040 and is convinced biogases will have a pivotal role in reaching this target by covering the 2040 residual demand for gas.[3]

[3] Impact Assessment accompanying the 2040 Climate Plan Communication

Therefore, EBA strongly advocates for a **100 bcm combined biogas and biomethane target for 2040** to be formally anchored in EU legislation. This figure is based on well-founded estimates of sustainable feedstock availability and would represent a transformative step for Europe's green energy landscape.



Potential of biogas and biomethane production in Europe

(EBA Statistical Report 2024)

Setting a binding target would align with the REPowerEU Plan's goals and give investors, developers, and communities the long-term certainty they need.

The production of 100 bcm of biomethane would generate more than 480 Mt of CO_2 emissions savings[4], a substantial contribution to the achievement of the EU's emissions reduction goal for 2040. Furthermore, the biogenic CO_2[5] captured through the biogas process could replace 89 million tons of fossil-derived CO_2 by 2040 in numerous critical industries, while digestate production and use as organic fertiliser would generate additional GHG emissions savings. This would not only defossilise CO_2 dependent sectors but also contribute to a circular and sustainable carbon economy.

Moreover, expanding the production of biogases to meet this target would generate thousands of new jobs across the EU. Due to the decentralised nature of biogas facilities, these benefits would be felt most strongly in rural and local communities, **boosting regional economies**, **fostering energy independence**, and empowering citizens across Member States.

To support this growth effort, the role of Member States will be of paramount importance in strong and close cooperation with the European Commission and the biogases value chain. Therefore, EBA strongly advocates for the establishment of a **European Biogases Charter** in 2025, which would set out clear commitments on biogases deployment targets up to 2040 and demonstrate Member States' dedication to accelerating biogases roll-out across the EU. Such a Charter would underscore the strong economic potential and positive future prospects for the biogases value chain in the EU over the short, medium, and long-term.

[4] Based on fossil fuel comparator of RED III Annex VI and assumption that 1Mj of energy is evenly split into three end-uses (transport, electricity and heat).

[5] EBA Policy Paper on Biogenic CO_2

This **European Biogases Charter** should include Member States' commitment to:

1. **National Pledges for Biogases**: Draft National Pledges for Biogases illustrating specific action plans for sustainable biogases deployment, so to substantiate Member States' ambition to use these renewable gases as a cornerstone of a sustainable, circular, and energy-secure Europe.
2. **Accelerate biogases deployment**: Streamline permitting procedures for biogases projects by implementing digitalisation, best practices, and coordinated administrative processes across Member States to reduce delays and uncertainty.
3. **Enhance market design**: Improve support schemes and market incentives to ensure long-term investment visibility, and the integration of environmental and circular economy benefits provided by biogases.
4. **Boost infrastructure and production capacity**: Facilitate investments to scale-up domestic production capacity of biogases, including grid connections, upgrading technologies, and storage infrastructure, ensuring alignment with national energy and waste management strategies.
5. **Promote circular economy contributions**: Acknowledge and strengthen the role of biogases in providing renewable energy, organic fertilisers, and biogenic CO_2, helping to decarbonise hard-to-abate sectors, restore soil health, and reduce dependence on fossil-derived CO_2.
6. **Strengthen strategic cooperation**: Commit to regular dialogue and coordination with the European Commission and the biogases sectors to align efforts, monitor progress, and ensure effective implementation of this Charter.
7. **Biogases Coordinator**: Appoint a Biogases Coordinator to supervise the achievement of the Charter's goals, while also overseeing and ensuring the alignment and harmonisation among the numerous EU legislative pieces –spanning from agriculture, to climate, environment and energy – regulating the biogases sector, so to avoid road blockers for the sector and support the needed ramp up of biogases in Europe.

Conclusion and call to action

The forthcoming 2040 Targets present a pivotal opportunity to embed biogases at the heart of Europe's clean energy future. EBA urges the European Commission and EU Member States to endorse a binding target of 100 bcm of biogases by 2040, and to jointly develop the European Biogases Charter by 2025. This will provide the political signal, strategic coordination, and enabling conditions necessary to unlock the sector's full potential.

The biogases value chain is ready to deliver. It is time to give it the recognition and support it deserves.

Contact
Anna Venturini, Policy Director, European Biogas Association, venturini@europeanbiogas.eu

About the European Biogas Association (EBA)
EBA fully believes in the future potential of renewable gas in Europe. Founded in 2009, the association is committed to the deployment of sustainable biogas and biomethane production and use throughout the continent. EBA counts today on a well-established network of over 300 national associations and other organisations covering the whole biogas and biomethane value chain across Europe and beyond.