WEBINAR

EBA Statistical Report 2025

Fuelling Europe's clean path to independence

10 DECEMBER 2025

10:00 - 11:00 CET

EBA
European Biogas Association

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www.europeanbiogas.eu

Welcome

Anna Venturini

Policy Director, European Biogas Association

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The report is available for free for all EBA members, upon purchase for external parties, and a print-on-demand purchase option is available for all readers.

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Agenda

10:00 – 10:05 Welcome

Anna Venturini, Policy Director, European Biogas Association

10:05 – 10:15 Keynote

Daniel Mes, Member of the EU's Future Competitiveness Task Force, European Commission

10:15– 10:50 Highlights from the EBA Statistical Report 2024

Moderated by Ángela Sainz Arnau, Communication Director, European Biogas Association

- Anastasiya Agapova, Technical Director, European Biogas Association
- George Osei Owusu, Technical and Project Officer, European Biogas Association
- Pablo Molina, Technical and Project Officer, European Biogas Association
- Gabriella Papa, Technical and Project Advisor, European Biogas Association
- Zorica Ubiparip, Technical and Project Advisor, European Biogas Association

10:50 – 10:55 Q&A Session

10:55 – 11:00 Conclusion and wrap-up

Anna Venturini, Policy Director, European Biogas Association

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Keynote

Daniel Mes

Member of the EU’s Future Competitiveness Task Force, European Commission

Highlights from the EBA Statistical Report 2025

EBA Technical Team

The biogases market

Anastasiya Agapova
Technical Director

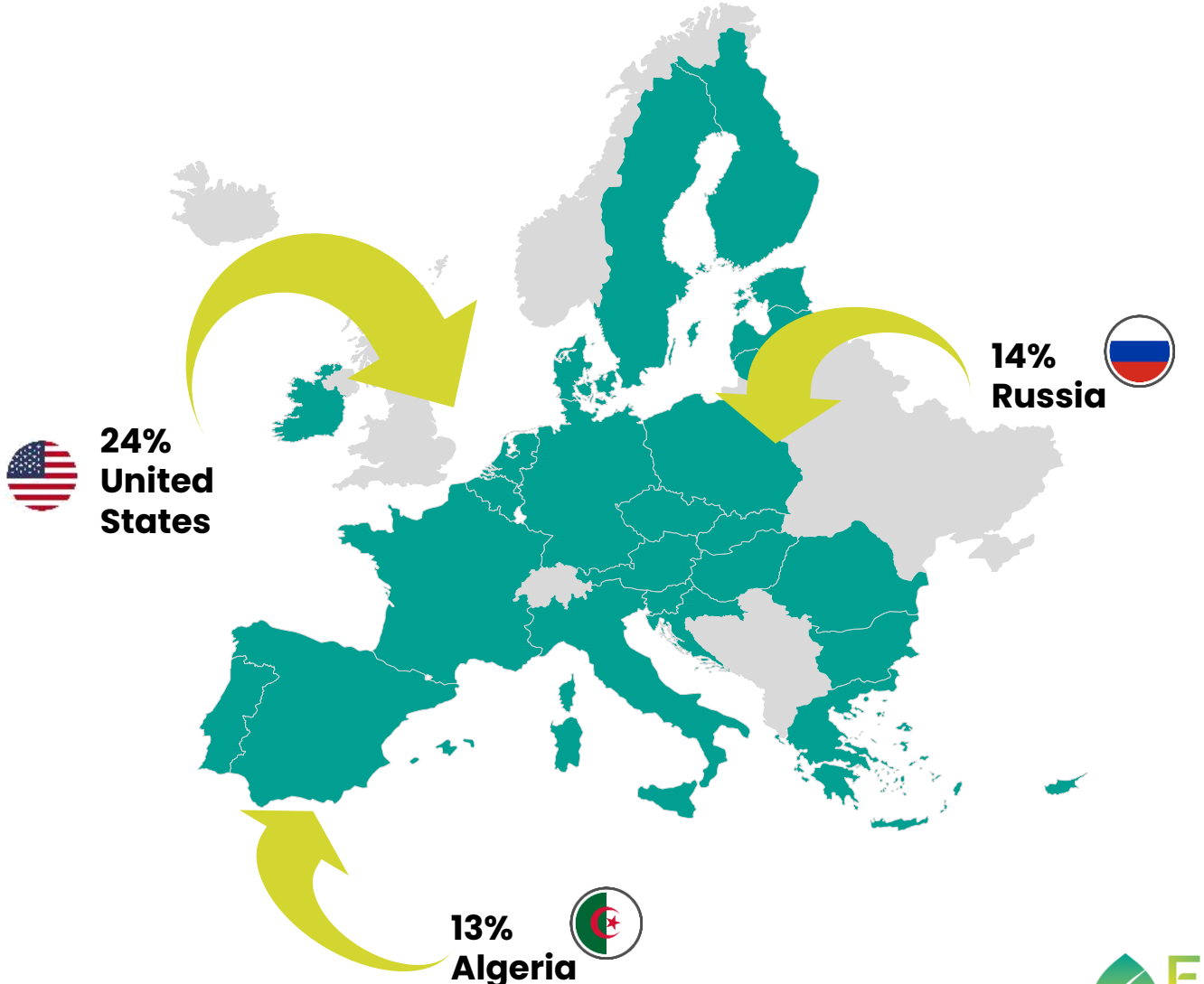
The EU imported 90% of its gas consumption in 2024

46%

EU's primary energy production comes from renewables.

12%

Share of renewable energy in total energy consumption.



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22 bcm of biogases are produced today in Europe

Combined biomethane and biogas production

22 bcm in Europe

=

Gas consumption of Belgium, Denmark and Ireland combined

19 bcm in the EU-27

=

6% of EU natural gas consumption in 2024

Biogas and biomethane plants

+21,000 plants in Europe

Combined biomethane and biogas production in Europe (bcm)

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25 biomethane-producing countries in Europe

Biomethane production in 2024

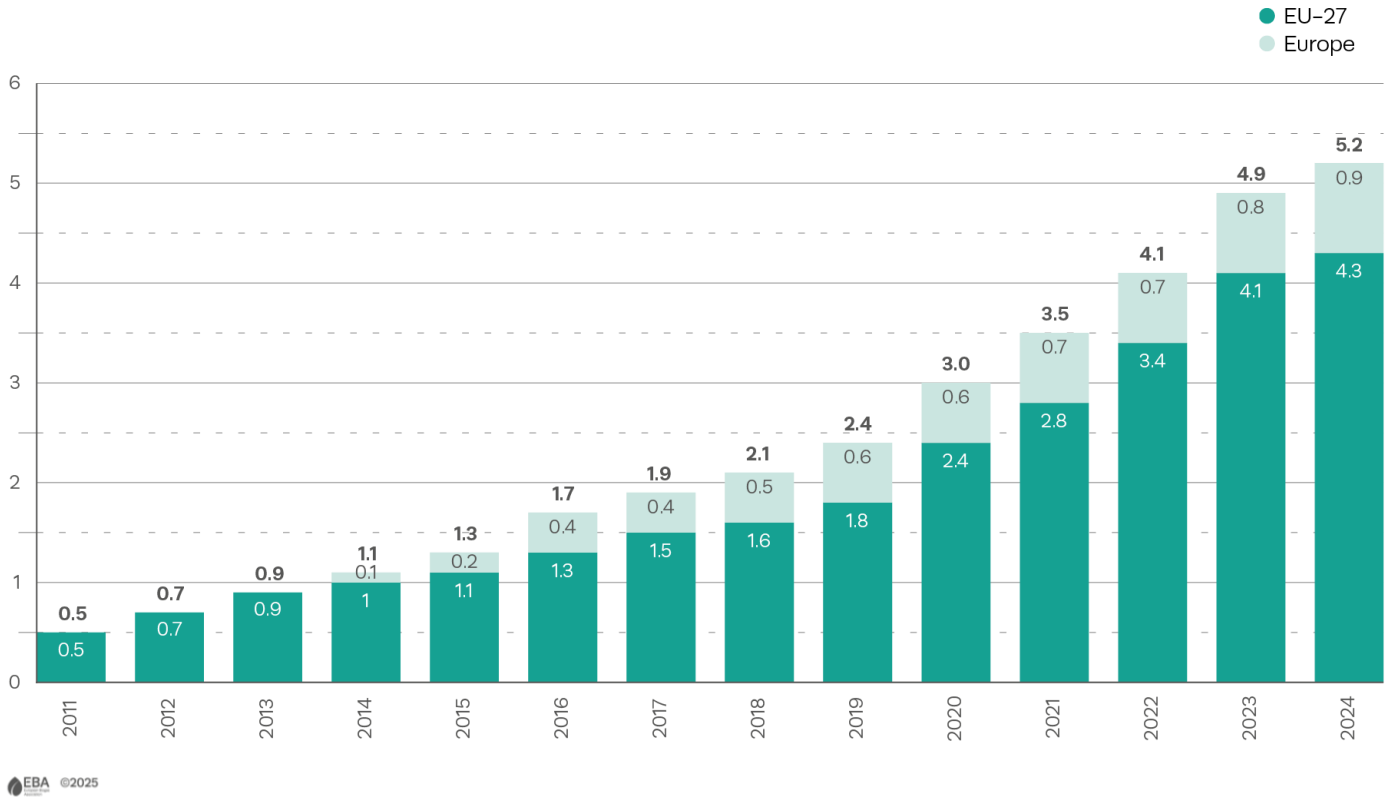
5.2 bcm
produced in Europe

4.3 bcm
produced in the EU-27

7 bcm/year
biomethane installed capacity in Europe (Q1 2025)

France, Germany, Italy, Denmark, and the UK are leading the production and scale-up of biomethane

Biomethane production in the EU-27 and Europe (bcm)



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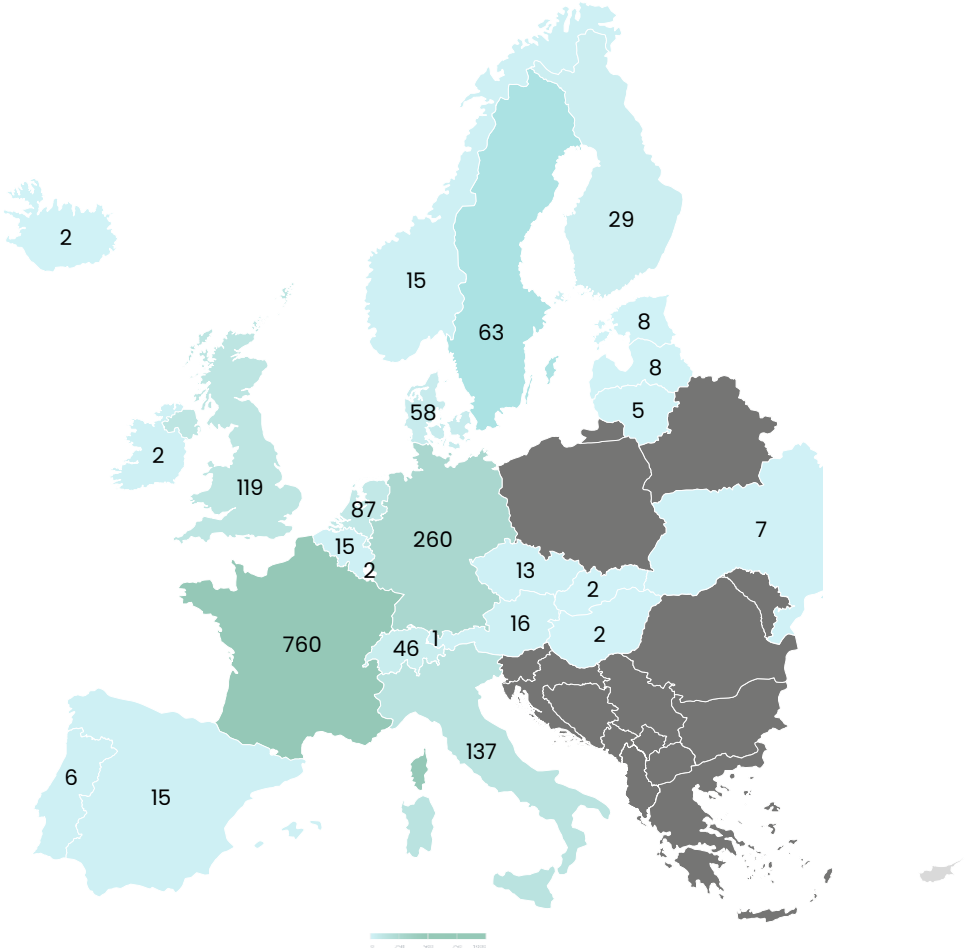
Biomethane plants in Europe and EU-27

Number of biomethane plants per country in 2024

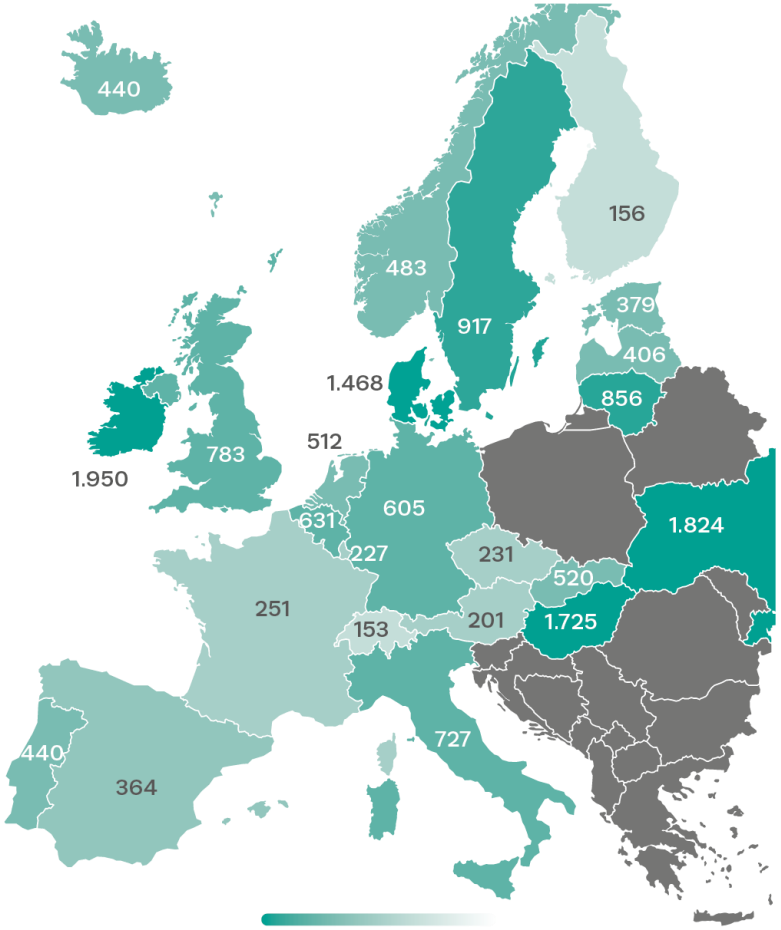
1,620
biomethane plants
in Europe

1,433
biomethane plants
in the EU-27



Average biomethane plant size per country in 2024 (m³/h)

483 m³/h
average size of biomethane plant
in Europe



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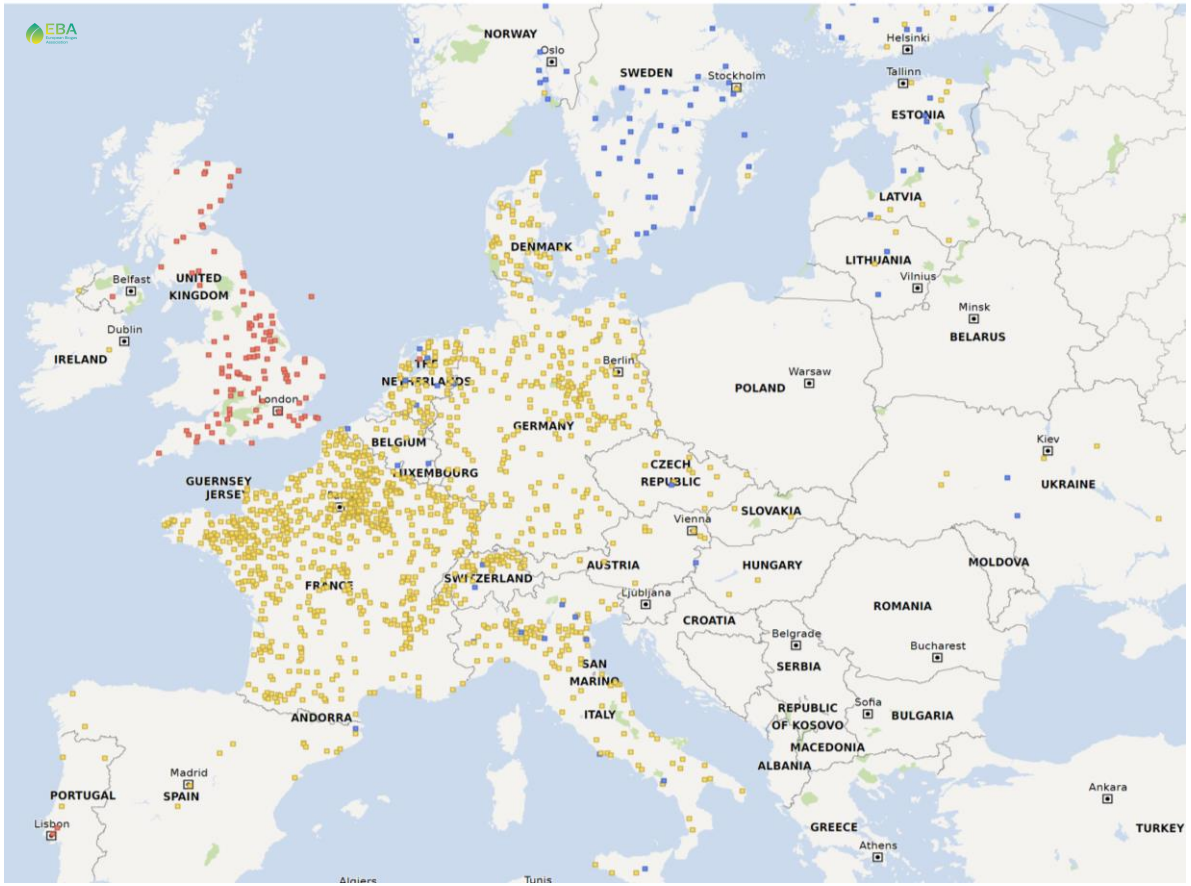
Grid connections and upgrading technologies

Biomethane plants connected to gas grid in Europe in 2025

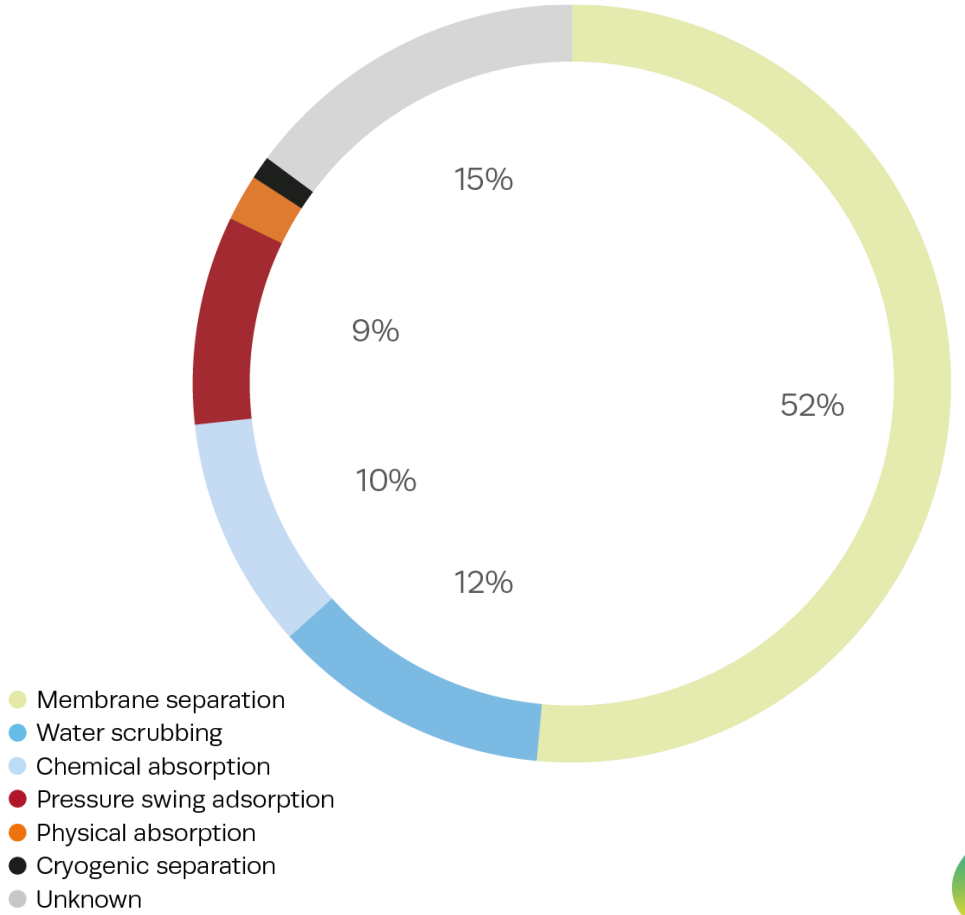
86% connected to grid
Mainly distribution grid



yellow – connected, blue – not connected, red – unknown

Upgrading technologies for biomethane production

½ of biomethane plants use
Membrane separation



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Transition towards sustainable feedstocks

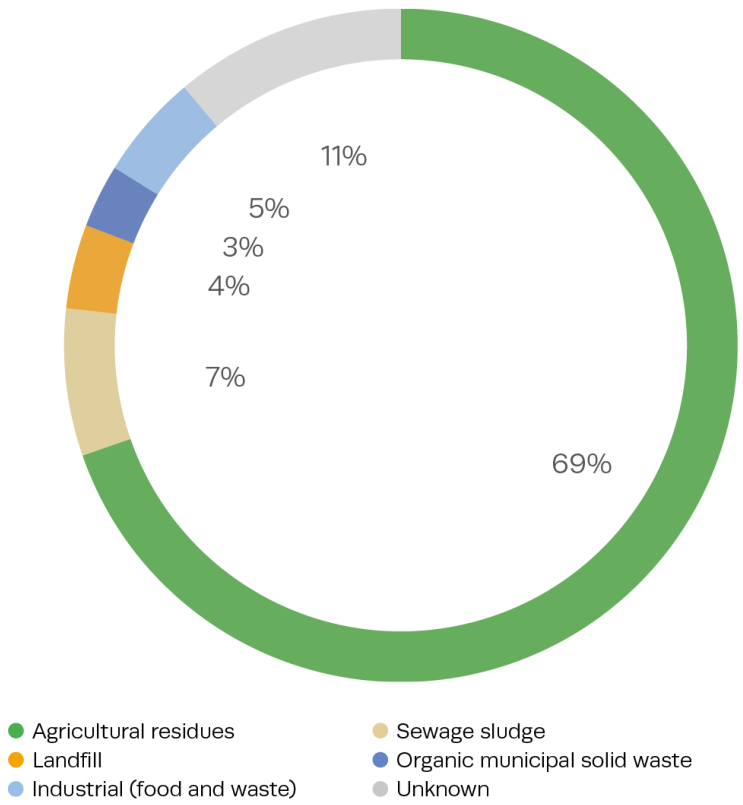
Primary biogas feedstock:

- Agricultural residues

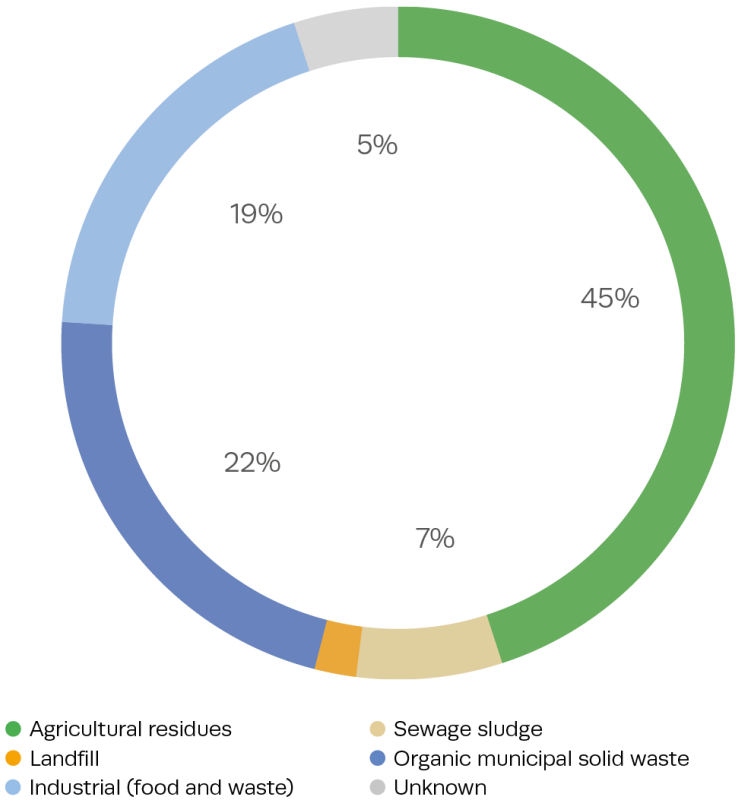
Primary biomethane feedstocks:

- Agricultural residues
- Municipal organic solid waste

Percentage of European biogas production per plant type in 2024



Percentage of European biomethane production per plant type in 2024



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End-uses of biogases

George Osei Owusu
Technical and Project Officer

Biomethane: a versatile renewable fuel

End-uses split: country specific

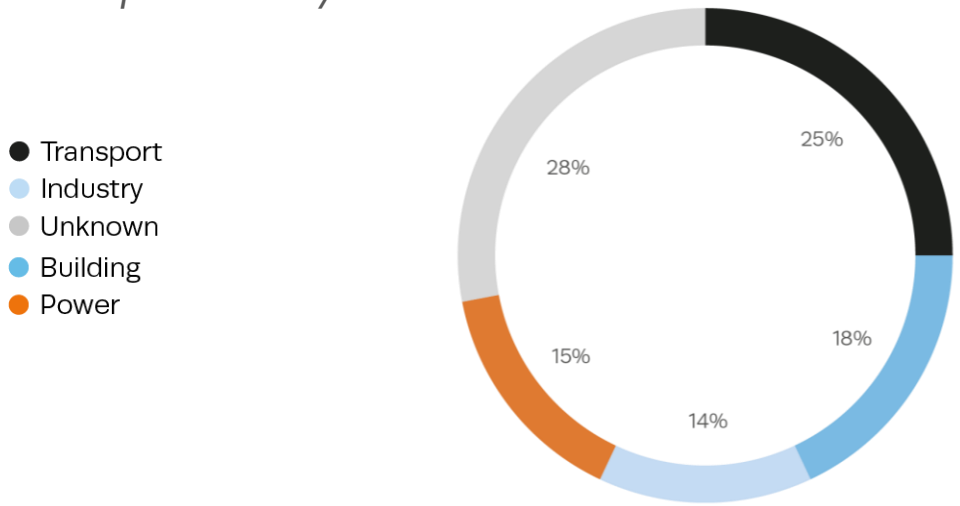
Main driver: support schemes

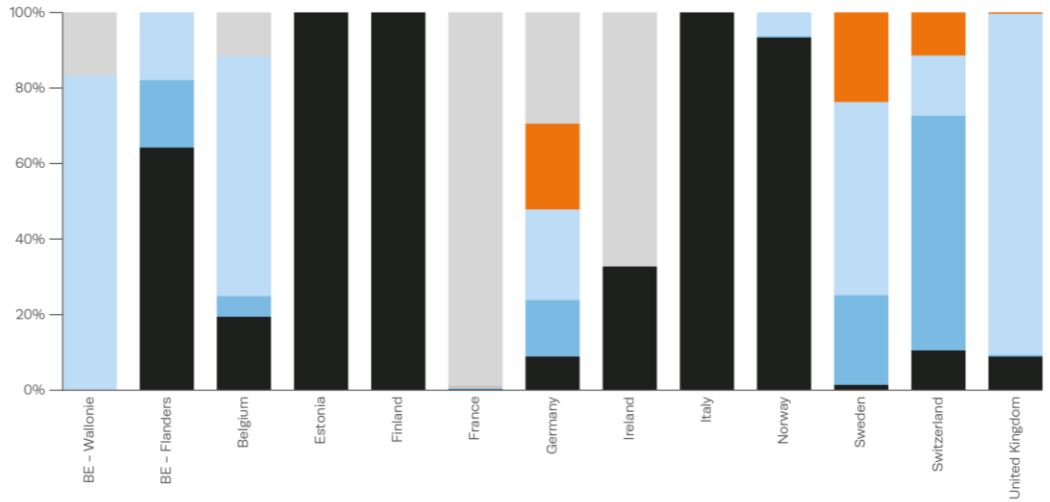
Transport

Heating and electricity

Industry

Percentage of biomethane production used in different sectors overall and per country





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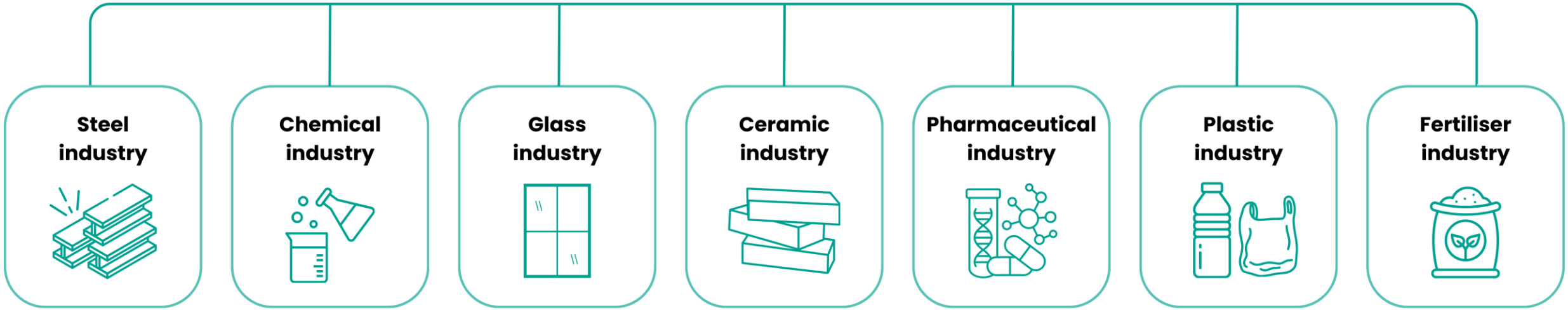
Defossilising the EU economy with biomethane

Biomethane applications in industrial sectors



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Transport: 101 bio-LNG active plants in Europe

Biomethane's contribution to transport decarbonisation

16 European countries producing bio-LNG

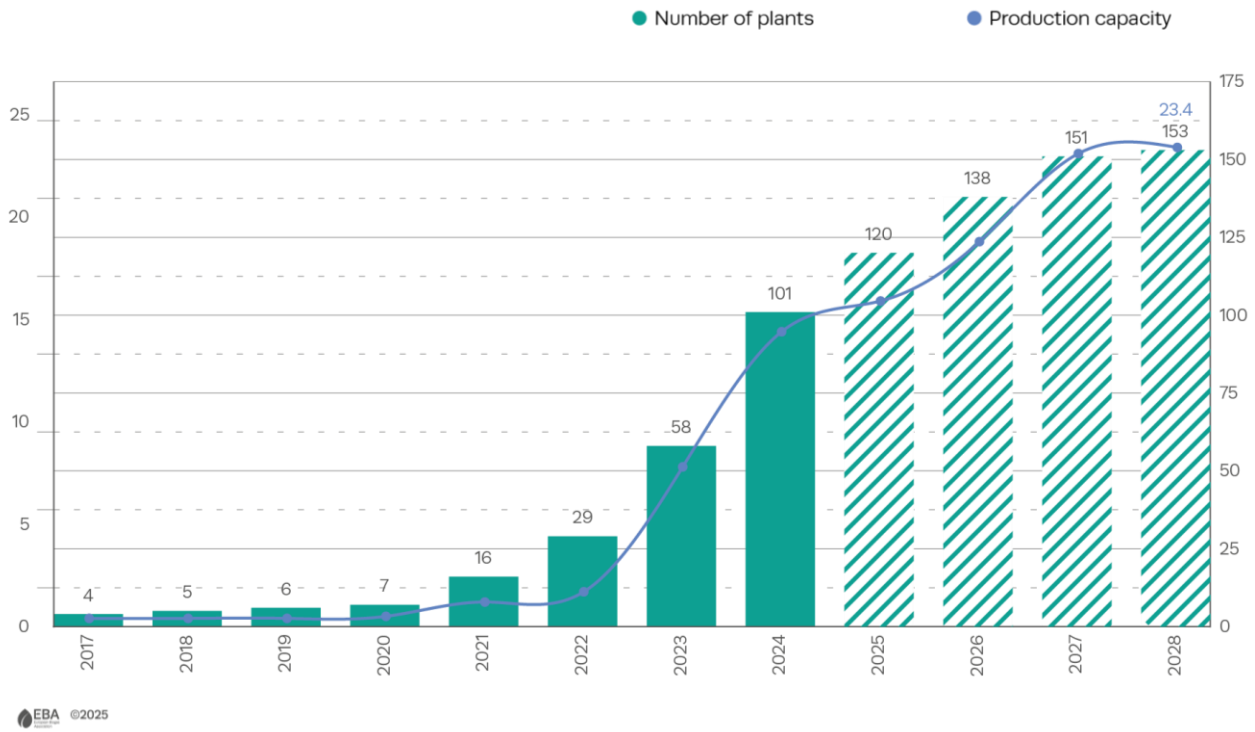
Belgium, Denmark, Finland, France, Germany, Italy, Latvia, The Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Ukraine and the UK

153 additional bio-LNG plants expected by 2028

Set to add an extra 13.1 TWh/year of production capacity

80% of the bio-LNG produced in Europe is used or planned to be used for road transport

Current and future development of the number of bio-LNG plants and production capacity (TWh/year)



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Biomethane's contribution to transport decarbonisation

LNG-fuelled vessels on the rise:

1,006 in 2023, rising to 1,369 in 2025

Biomethane's contribution to transport decarbonisation

Immediate integration

Fully compatible with existing LNG-powered vessels

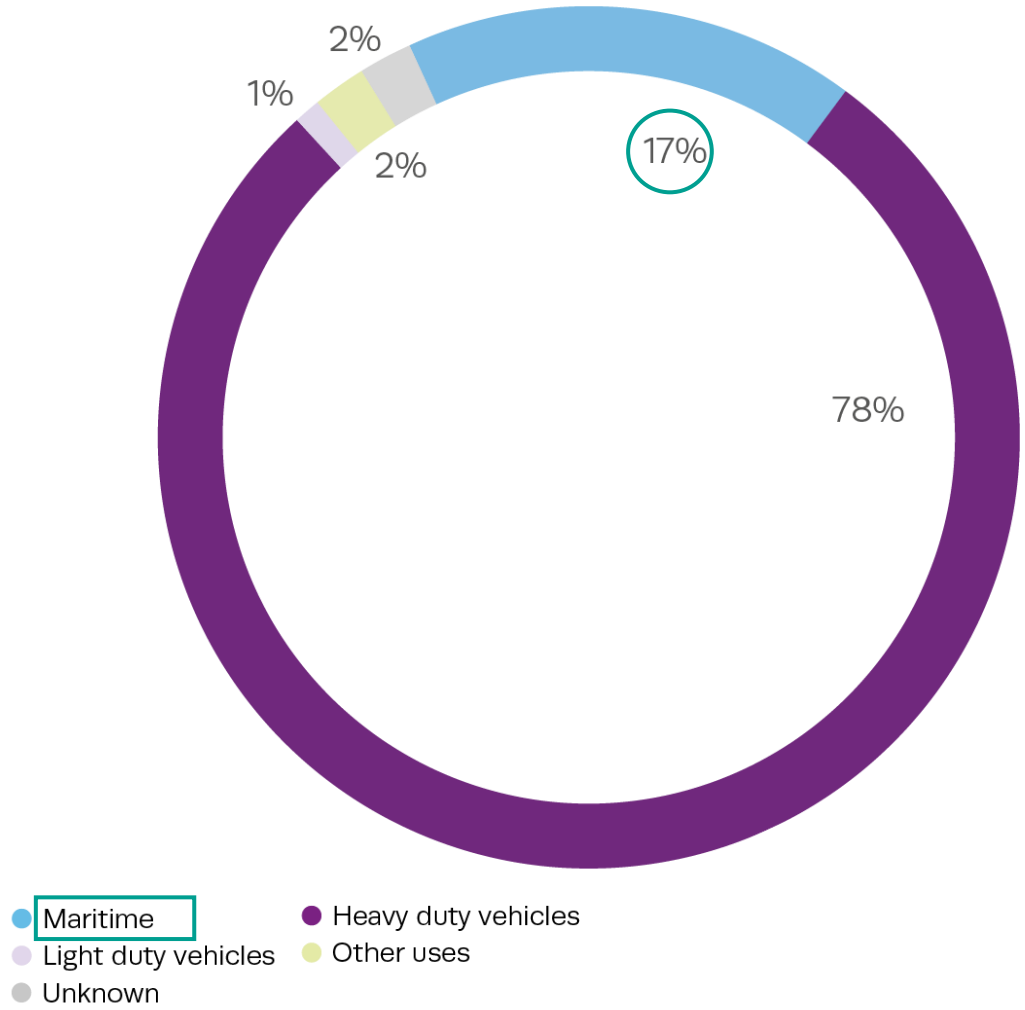
Scalable investments

- 87 new LNG vessel orders in the first half of 2025
- Up to 100,000 t/yr biomethane by 2030 targeted under various MoUs

Emission reduction

Up to 80% GHG reduction shown in Well-to-Wake assessments

End Uses of bio-LNG and their share (%)



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Completing the nutrient cycle with digestate

Gabriella Papa
Technical and Project Advisor

Digestate's role in circularity and sustainability

Circular approach

Sustainable crop yields with recycled nutrients

Fertilising value

Substituting part of synthetic fertiliser import in EU, which amounted to 24.2 Mt in 2024

Natural gas avoidance *2 bcm gas use avoided*

Natural gas: main raw material and energy source to produce synthetic nitrogen fertilisers

GHG reduction potential *10 Mt of CO_2 equivalent saved*

By displacing synthetic nitrogen fertilisers with digestate

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25 Mt digestate in 2024 for use as organic fertiliser

Digestate production in Europe

Most common end-use:

Direct application as an **organic fertiliser**

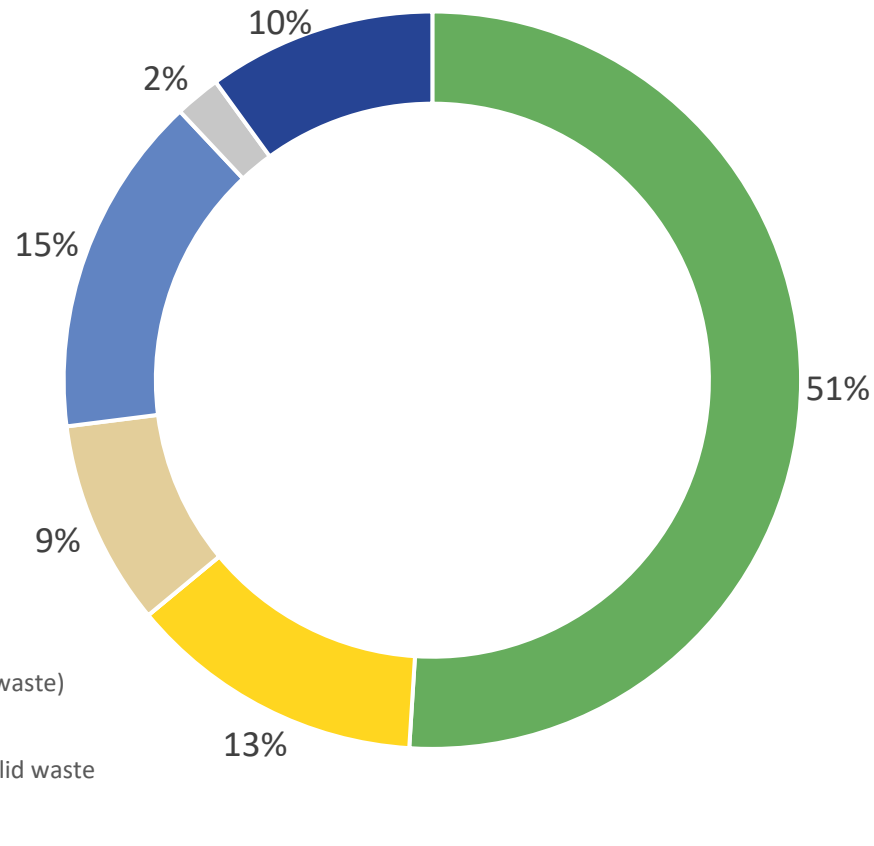
Feedstock source:

+50% derived from **agricultural feedstock** (mainly manure)

Main producers:

- Germany
- Italy
- France
- United Kingdom

Share of digestate types by feedstock source in Europe, calculated from combined biogas and biomethane production per feedstock category, on a dry matter (DM) basis, for 2024



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Best practices for digestate

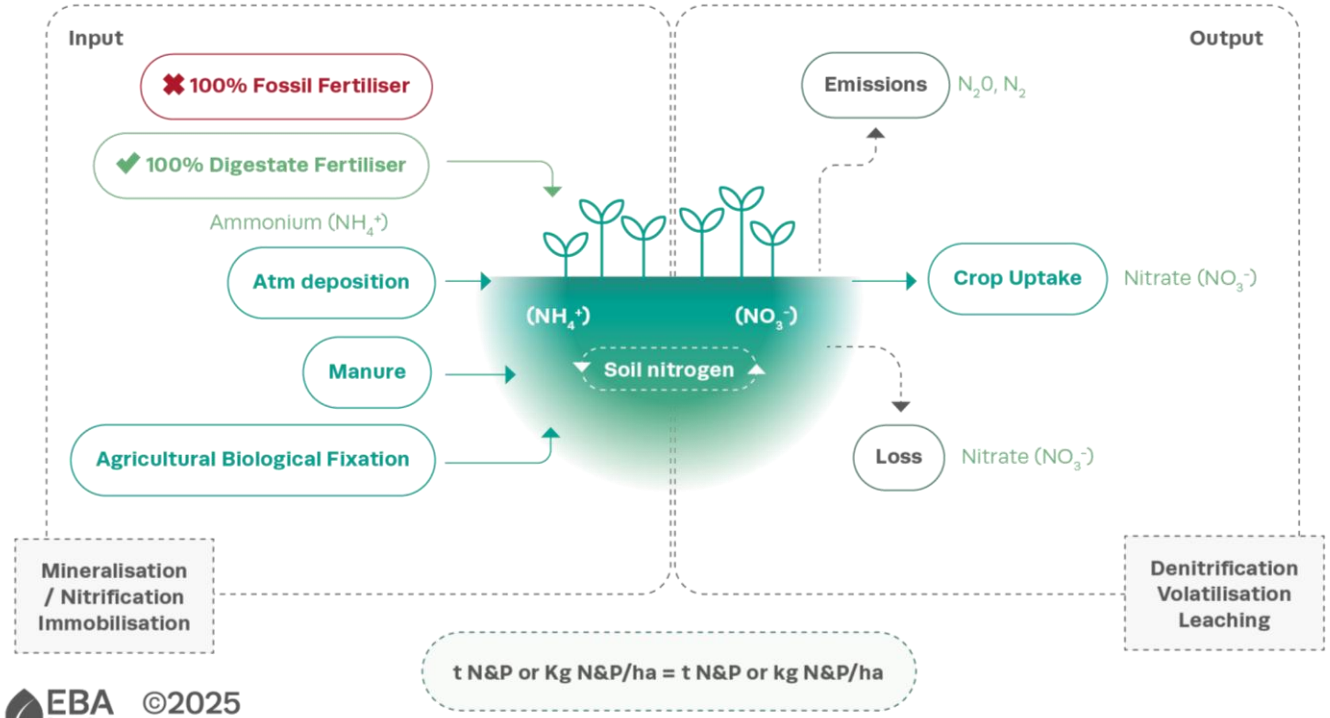
Digestate hygiene:
Controlling feedstock quality and process parameters in AD

Exclusion of contaminants:
Strict exclusion of plastics, glass and inert materials

Heavy metal management:
Monitoring and regulating heavy metals in input biomass

Advanced machinery and precision application:
GPS and sensors reduce nutrient losses and potential odour emission

Schematic nitrogen budgets showing input (left) and output (right)



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Digestate: an alternative to synthetic fertilisers

25 Mt (DM)
digestate produced
Europe, **2024**

Digestate can already displace:

17%
Nitrogen-based fertilisers
(N demand in EU-27: 8.3 Mt/year)

25%
Phosphorus fertilisers
(P demand in EU-27: 0.9 Mt/year)

7%
Potassium fertilisers
(K demand in EU-27: 2.5 Mt/year)

With the current level of growth of biogas sector

90 Mt (DM)
digestate produced
Europe, **2040**

Digestate will displace:

65%
Nitrogen-based fertilisers

84%
Phosphorus fertilisers

25%
Potassium fertilisers

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BioCO_2 from biomethane production

Pablo Molina
Technical and Project Officer

CCUS of bioCO_2 from biomethane production in Europe

70 biomethane plants
in 2024

0.61 Mt bioCO_2/year
captured in 2024

+80 biomethane plants
by 2026

+1 Mt bioCO_2/year
captured by 2026

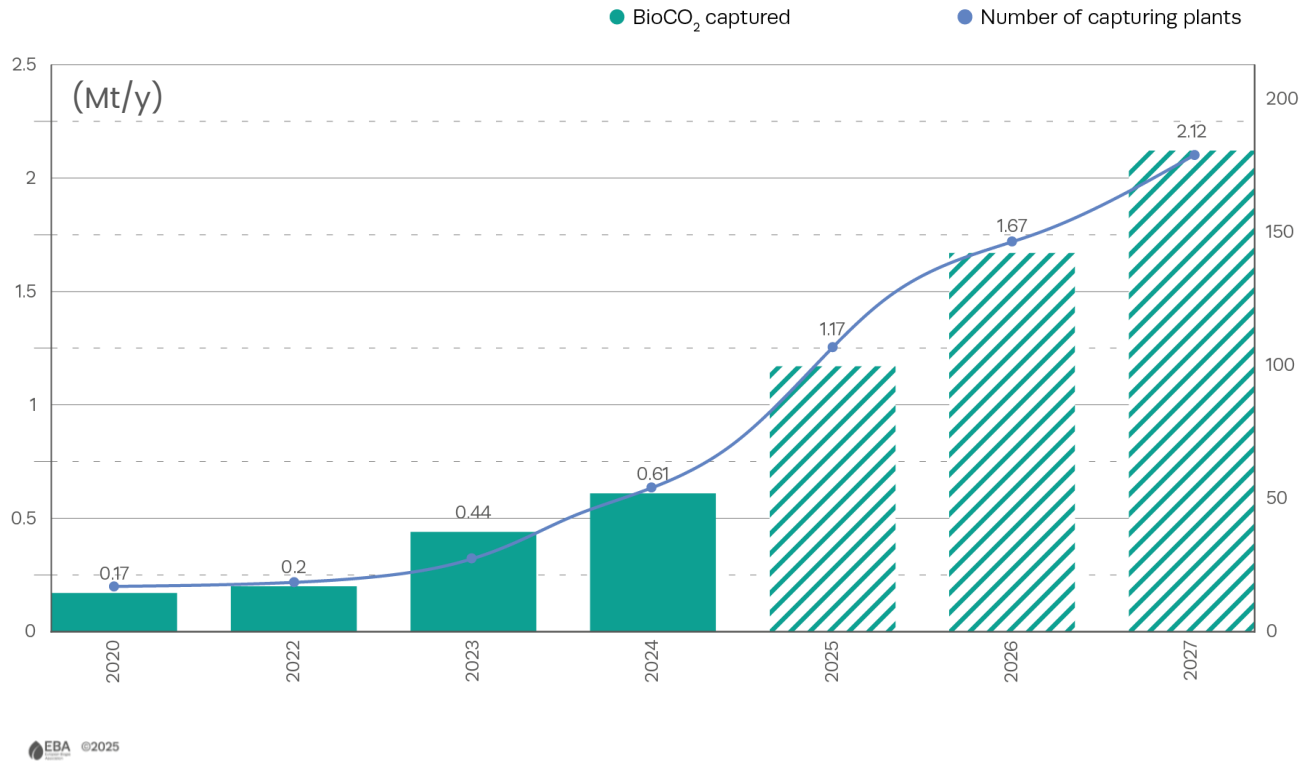
75% captured bioCO_2 directed to CCU

32%
Greenhouses

21%
Food and beverages

10%
E-fuels

Historical and projected captured biogenic CO_2 Mt per year and number of capturing biomethane plants



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Distribution per country by 2027: bioCCU or bioCCS?

Mapping of future facilities capturing $bioCO_2$

UK: expected to remain the leading capturer from biogas

- Instability of local CO_2 markets

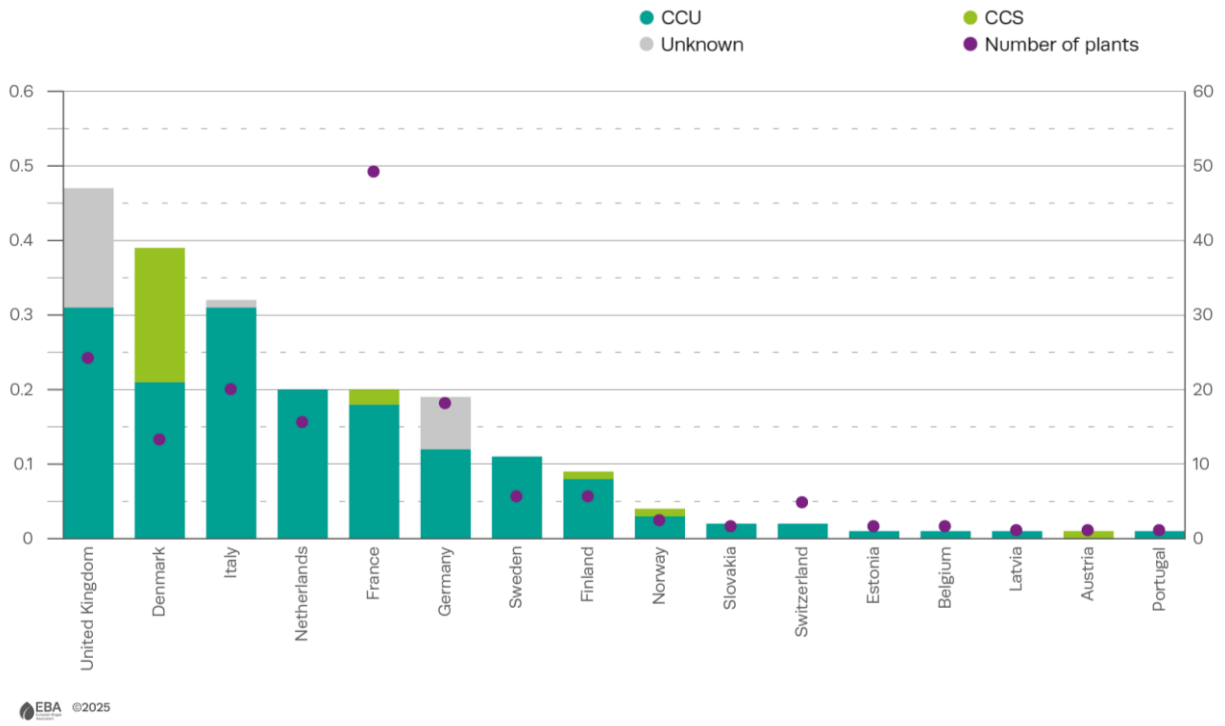
Denmark: CCS adding considerable capacity

- E-fuels driving demand
- Larger scale projects

Distribution beyond 2027 will depend on:

Infrastructure, e-fuels developments, ETS, $bioCO_2$ certification, support schemes etc.

Captured $bioCO_2$ (Mt) per country and number of plants expected in 2027



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Biogases growth prospects

Pablo Molina
Technical and Project Officer

Biomethane investments by 2030

€ 28
billion

earmarked to be invested in biomethane by 2030

7.3
bcm/year

of added biomethane capacity in Europe by 2030

900
Biomethane plants

Planned to enter operation in the next 5 years.

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Spain, Denmark, and the UK are the top countries for planned investments

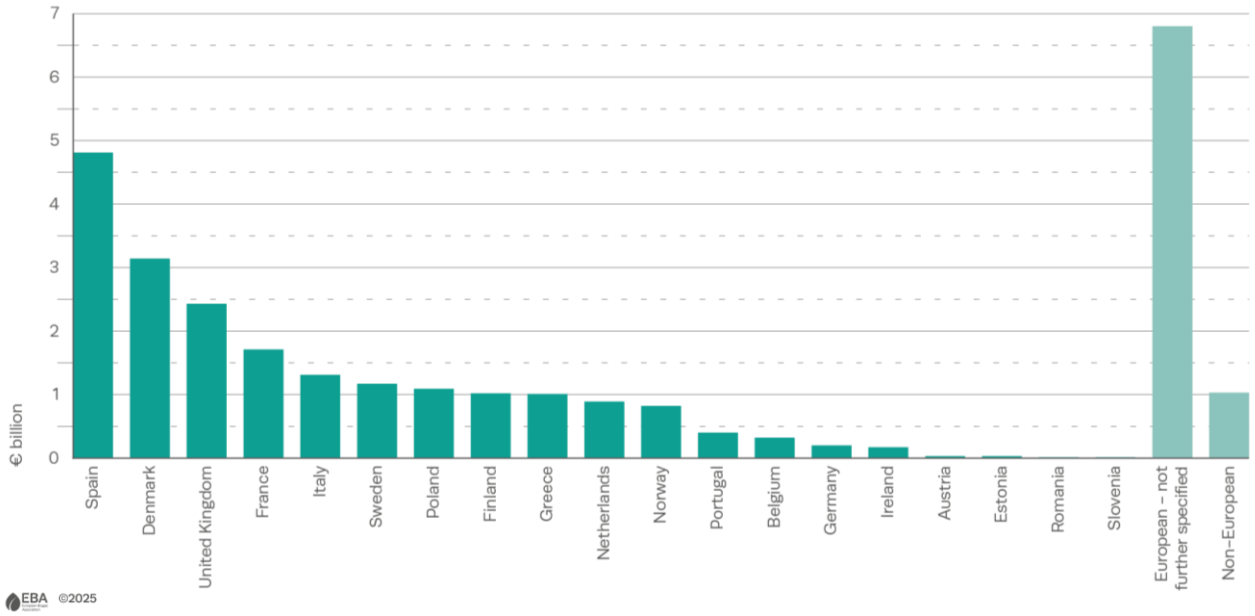
Top countries

Spain	€ 4.8 billion
Denmark	€ 3.1 billion
United Kingdom	€ 2.4 billion
France	€ 1.7 billion
Italy	€ 1.3 billion

Other investment destinations

European (yet to be specified)	€ 6.8 billion
Non-European	€ 1.02 billion

Geographical distribution of investment volumes



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Growth prospects for biomethane

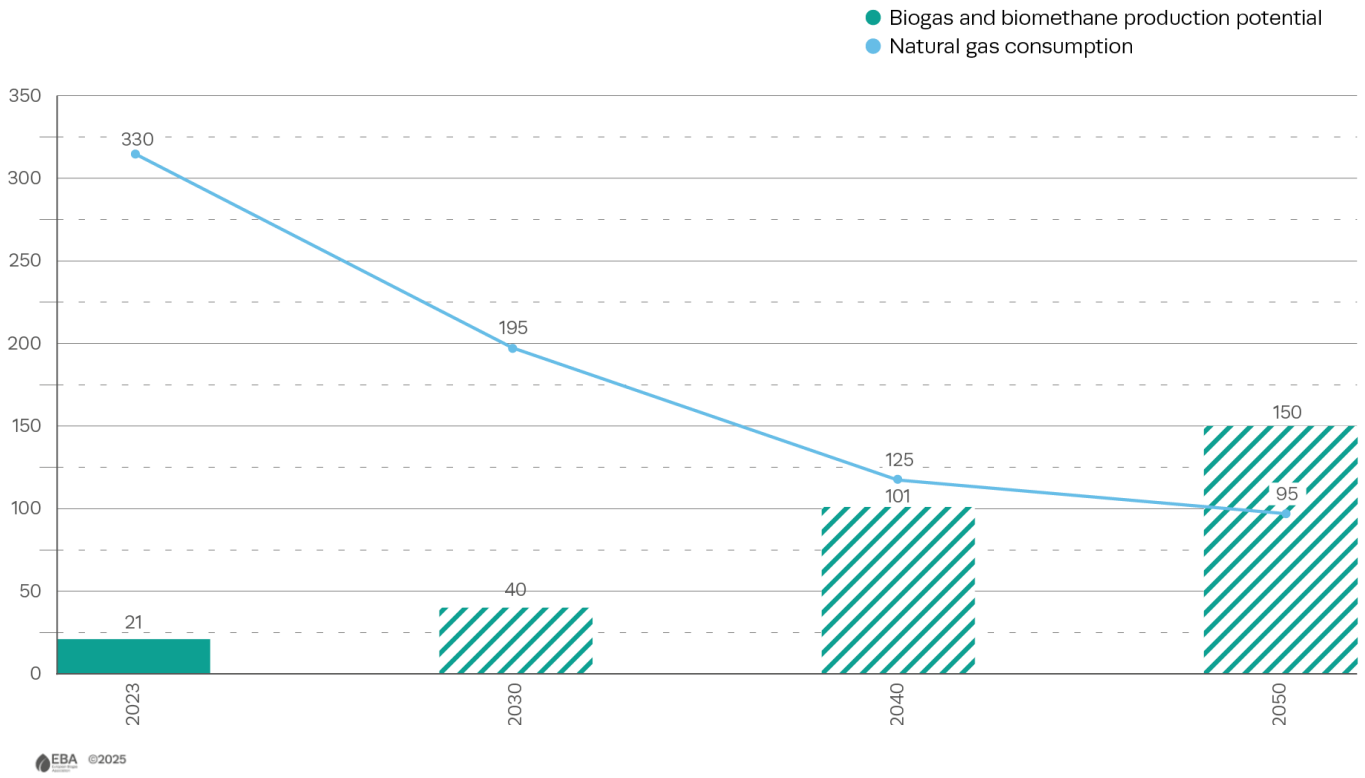
Continued need for gas in the coming decades

By 2040–2050, projected natural gas consumption and projected biogas production potential are expected to converge

Research and innovation will unlock further potential for biogases:

- E-methane via methanation
- Gasification

Comparison of current and potential biogas production in the EU-27 for 2030, 2040 and 2050 with current and anticipated natural gas demand for those years, according to specific EU regulations



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Country analyses

Zorica Ubiparip
Technical and Project Advisor

NECPs 2030

Anticipated 2030 biomethane production

26 countries have a biomethane and/or a biogas target

26 bcm: Total volume of biomethane and biogas committed towards 2030

Map showing 2030 sector projections included in the final NECP2024 for the EU-27 countries

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Focus on France

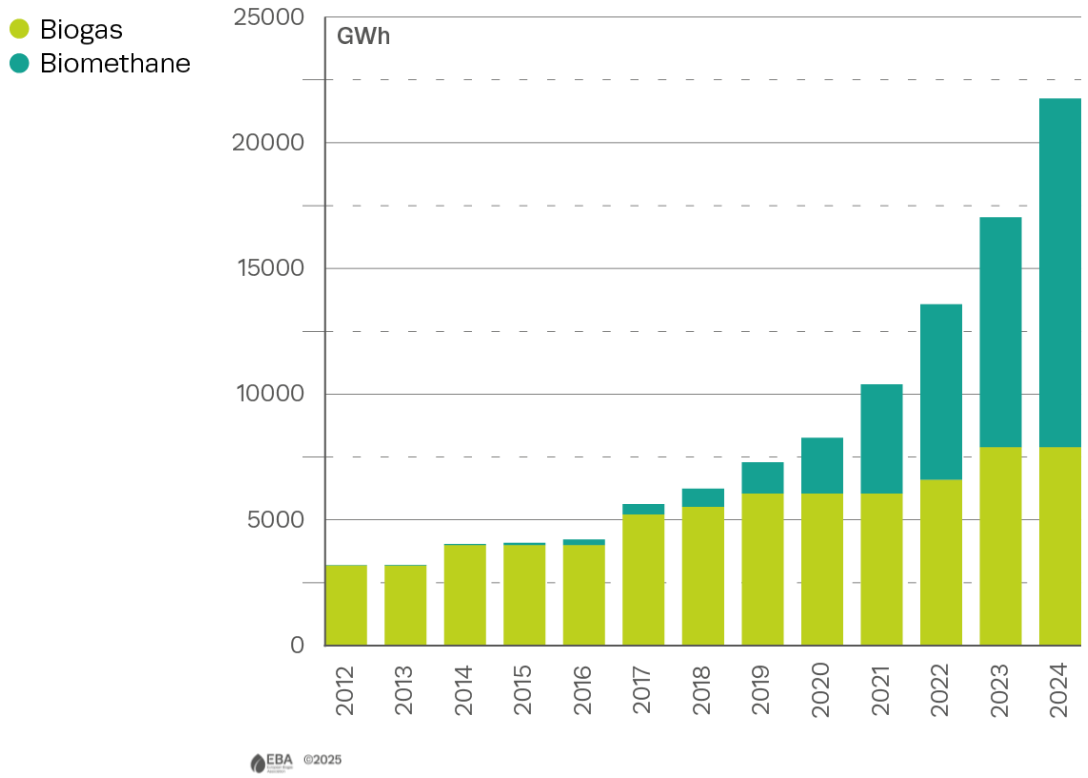
Leading country in biomethane market development: **1.6 bcm/year installed capacity**

1,830 biogas and biomethane facilities producing 21.8 TWh/year

100% of produced biomethane is **injected into the grid**

627 new projects at various stages of development, with an expected 29.2 TWh/year of combined production capacity

Development of biomethane production (GWh)



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Focus on Spain

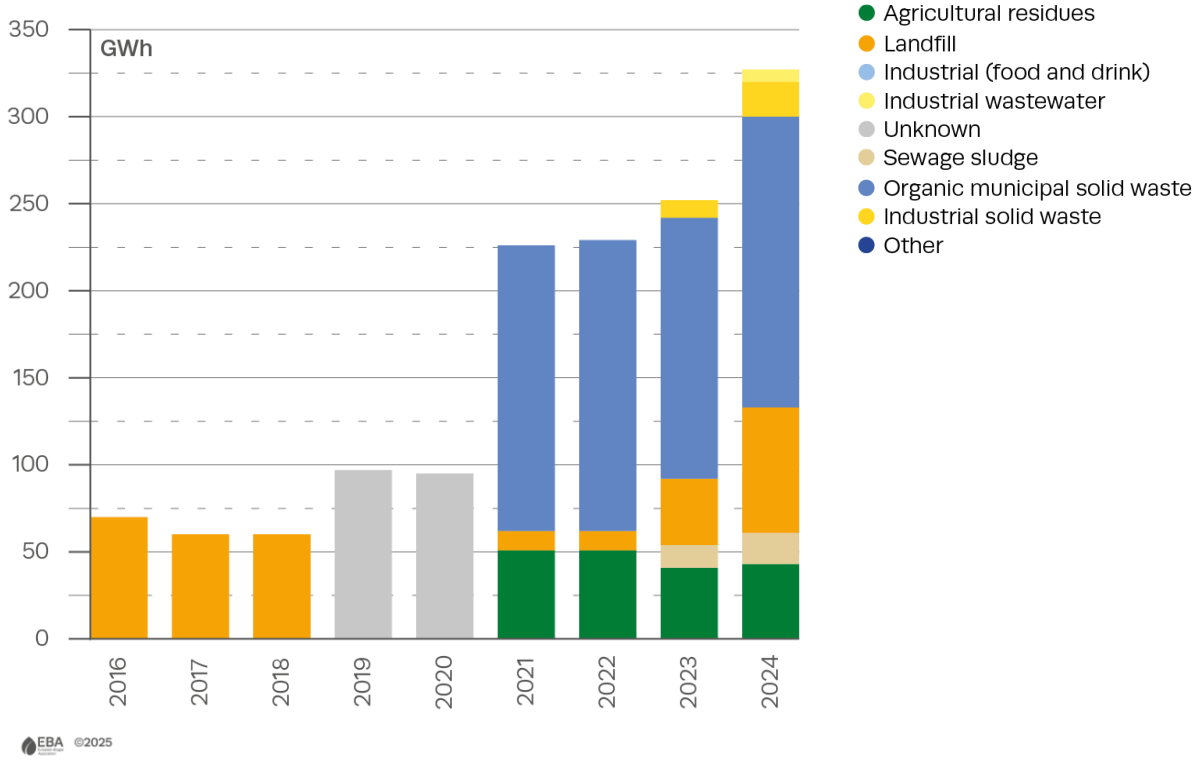
>100 TWh/year biomethane potential: 4th-highest in Europe, ready to be tapped

Top country for planned investments: **€4.8 billion** expected by 2030

Rapid expansion of **biomethane plants**: from 5 in 2022 to 14 in 2024

75 GWh of biomethane production growth, reflecting strong sector expansion

Development of biomethane production (GWh)



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Socio-economic impact of biogases

Zorica Ubiparip
Technical and Project Advisor

Reducing GHG emissions with biogases

Avoiding methane emissions	**349 kg CO_2, eq per MWh** of manure-derived biomethane
Replacing synthetic fertilisers	**199 kg CO_2, eq per MWh** of biomethane
Building soil organic carbon	Contribute to **carbon removal** and **carbon farming**
Replacement of fossil CO_2 and permanent CO_2 removal	**124 kg CO_2, eq per MWh** of biomethane
Replacement of fossil fuels	**462 kg CO_2, eq per MWh** of biomethane

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Socio-economic impacts of biogases value chain

- Organic waste processing
- Biogenic carbon dioxide provision
- GHG emissions reduction
- Rural development
- Soil health
- Clean tech leadership
- Energy security
- Sustainable growth
- Flexible operations
- Solid EU value chain
- Job creation
- Circular economy

>250,000
JOBS IN 2023

500,000
JOBS IN 2030

1.8 million
JOBS IN 2050

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We want to hear from you!

Insert your question(s) in the Q&A

Moderated by:

Angela Sainz Arnau
Communications Director

Conclusion and wrap-up

Anna Venturini

Policy Director, European Biogas Association

Thank you!

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