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Picture courtesy of Gas Connect Austria

Biomethane injection in Europe's gas system

Budapest Biogas Summit 2026

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Budapest

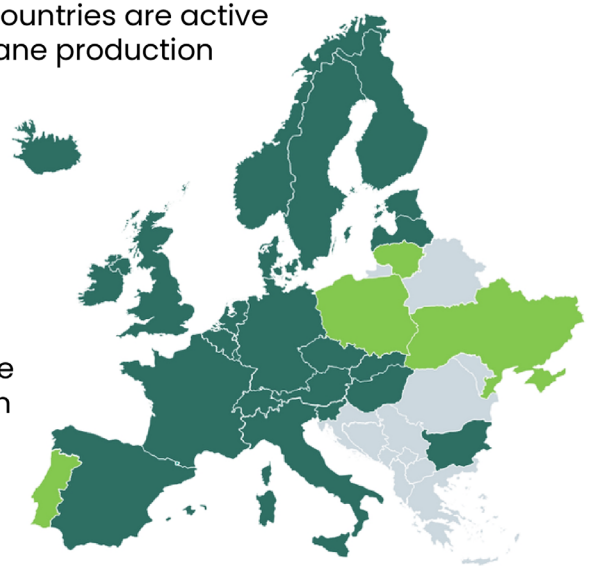
Biomethane in Europe: where we stand today

22 bcm
of biogases produced in Europe, equivalent to the entire inland natural gas consumption of Belgium, Denmark and Ireland combined



5.2 bcm
of biomethane produced in Europe, with 7 bcm/year of installed capacity

25
European countries are active in biomethane production



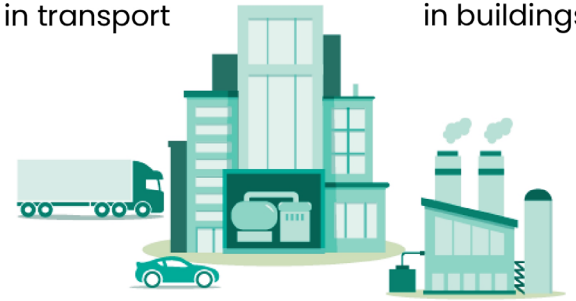
9%
increase in biomethane produced in Europe

● New producing countries in 2022 and 2025: Portugal, Lithuania, Ukraine, Poland

Balanced distribution across end-uses:

25%
in transport

18%
in buildings

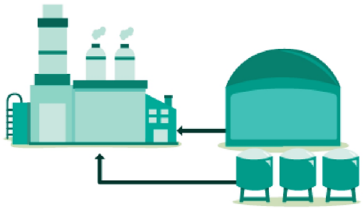


15%
in power generation

14%
in industry



25 Mt
digestate produced from biogases production in Europe



0.5 Mt
of bio-CO_2 captured from biomethane production



250,000
green jobs in Europe

*Figures for end of 2024

European framework for Renewables Gases

Biomethane – Regulatory basis and ENTSOG's mandate

Gas & Hydrogen Decarbonisation Package
(EU/2024/1789)

- ✓ Monitoring and transparency of biomethane injections at EU level
- ✓ Cooperation between TSOs, DSOs and competent authorities
- ✓ Network planning and system adequacy assessments
- ✓ Contribution to security of supply, decarbonisation and flexibility

Integration of biomethane into system planning and TYNDP 2026

Voluntary reduction of natural gas demand for EU countries

2024 | 2025 | 2026 | 2027 | 2028 | 2029 | ...

National transposition & market integration

First full EU-wide renewable gas injection monitoring

#REPowerEU

35 bcm of biomethane production

Biomethane momentum in Europe

Biomethane Development

Biomethane is a very important contribution to the energy transition, building on existing infrastructure and integrating renewable gases

Biomethane injections have increased across most EU Member States with 43,2 TWh injected into TSO and DSO grids across the EU

More biomethane plants came online, while in other cases operational plants reached their nominal capacity over time

Current injection levels remain well below the 2030 REPowerEU target of 35 bcm



Yearly Biomethane Injections

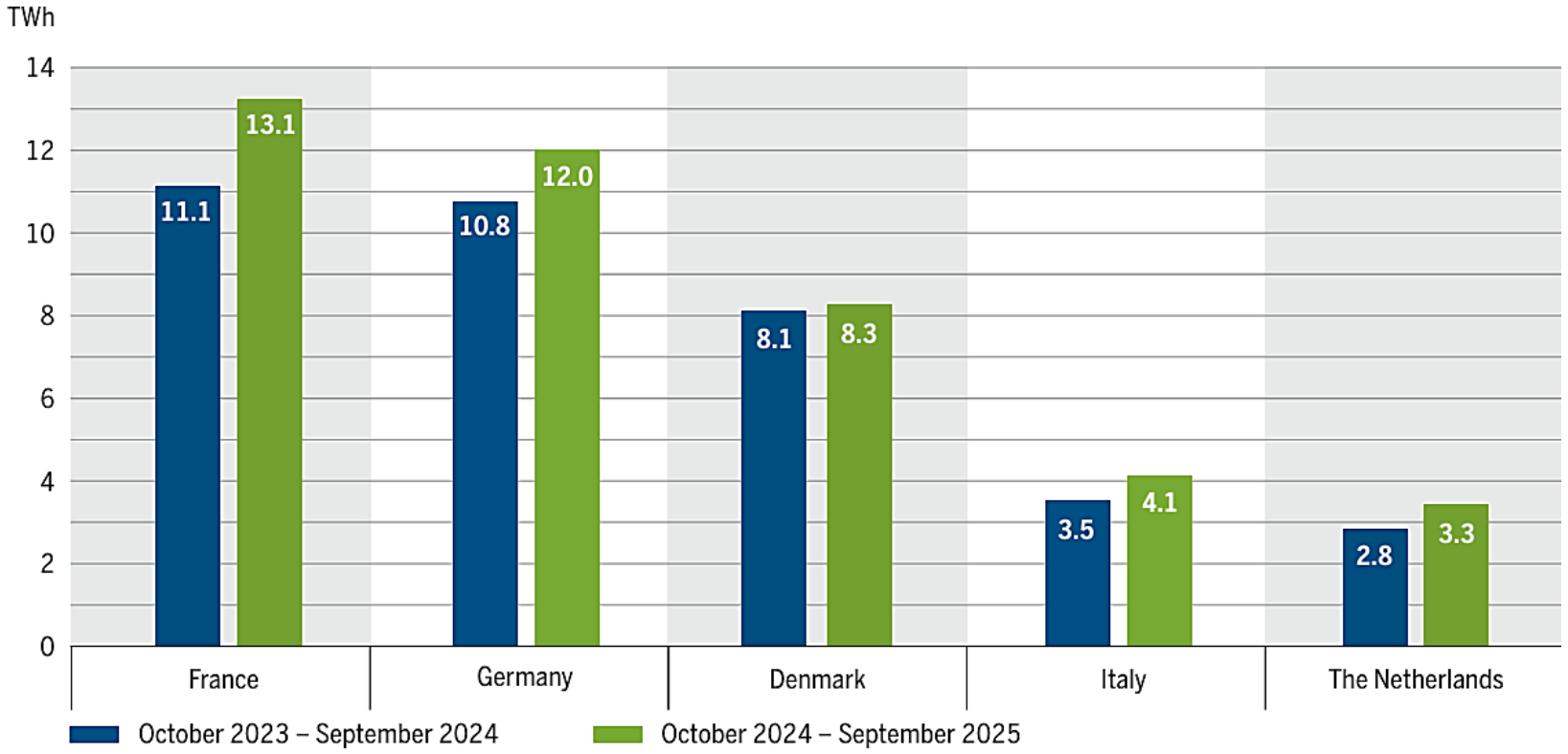


Figure 1: Large volume biomethane countries (injections in TWh)

Top 5: Large volume countries – TWh YoY

France: 2 TWh increase - new injection points and production sites reaching operating levels

Germany: 1,2 TWh increase – incentives to increase renewable energy sources for heating and cooling. More injections into gas grid.

Denmark: 0,2 TWh increase. Share of biomethane in the Danish consumption at approx. 40%.

Italy: 0,7 TWh increase approx. – new incentives and more plants easier being connected to grid.

Netherlands: 0,5 TWh increase – more biomethane plants being connected to grid.

Injection growth rises, but remains uneven across Europe

GWh volume countries YoY - injections

- Czech Republic: approximately 300% increase
- Lithuania: nearly 100% increase
- Belgium: nearly 100% increase
- Slovakia: started first injections – reaching 75 GWh
- Spain: 30% increase

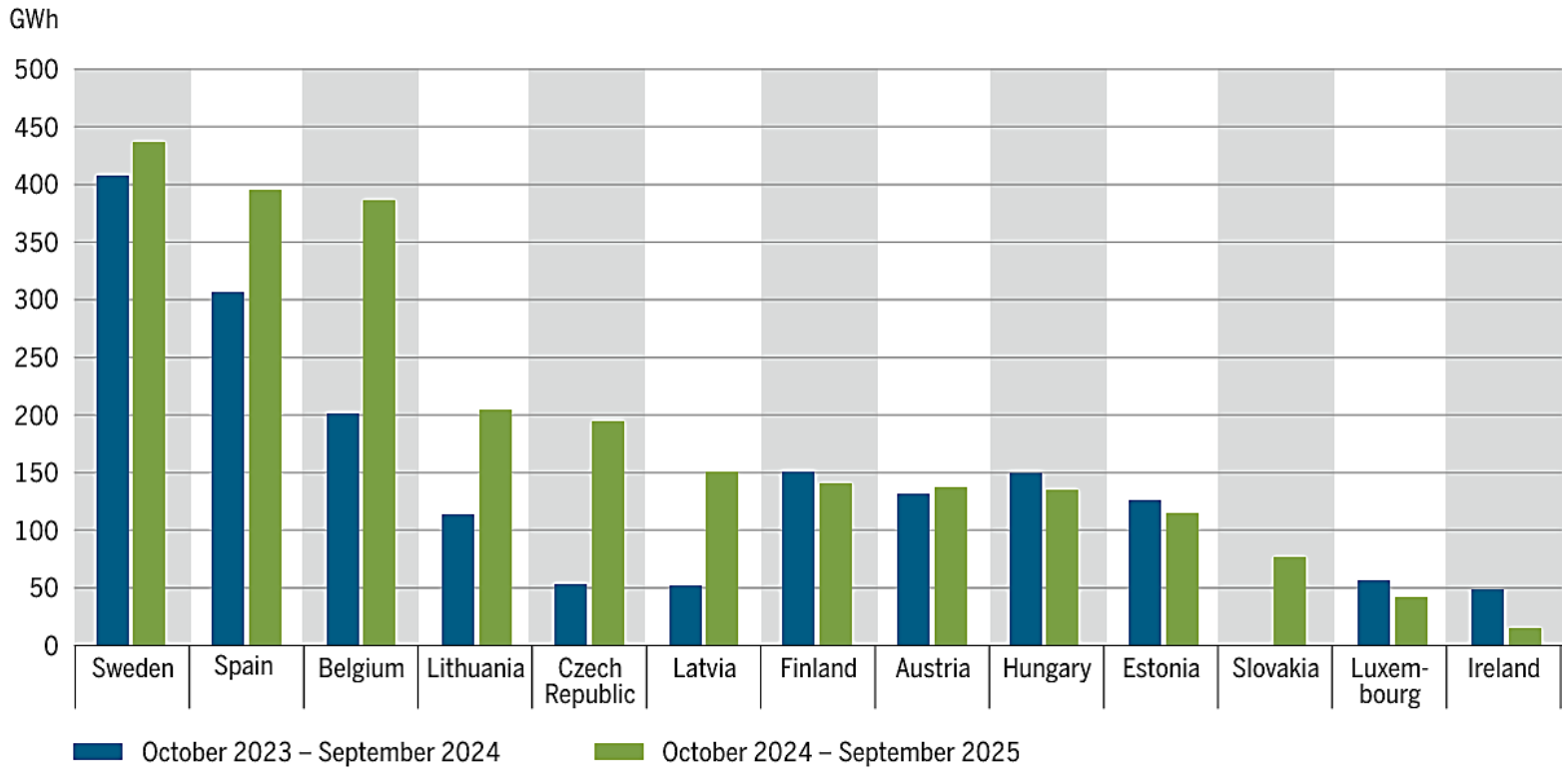
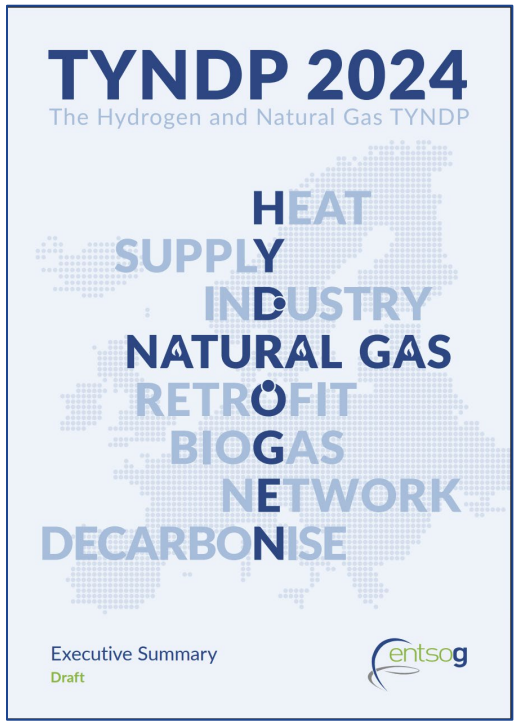


Figure 2: Remaining biomethane countries (injections in GWh)

Connecting Biomethane to Gas Infrastructure

Repurposing to meet renewable gases demand
Long-term planning





- **Repurposing of pipelines** for transport of renewable and low carbon gases transport **without compromising** the ability of the natural gas network to fulfil its transport tasks, e.g., security of supply

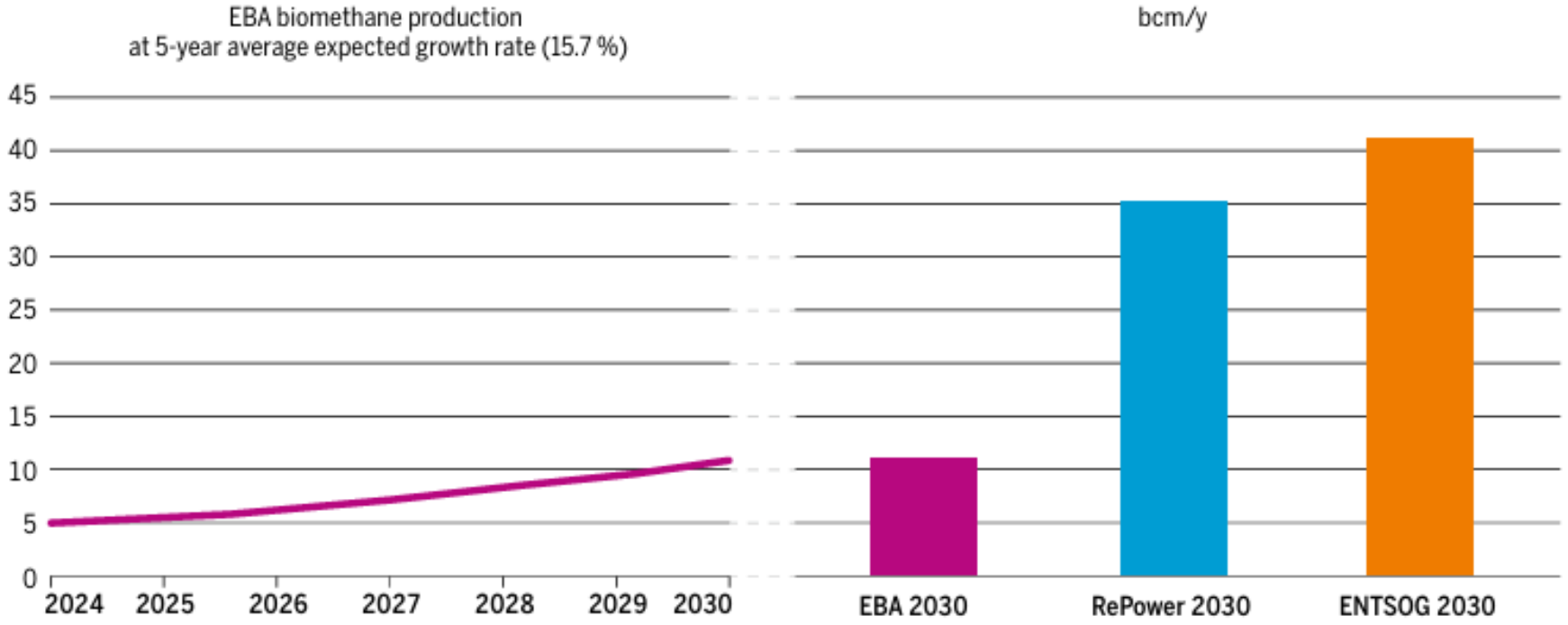
- New challenges with **electrification, need for system backup and flexibility**. Experience of infrastructure planning via well-established processes like **joint TYNDP scenarios for gas and electricity**.

- Less baseline but can **maintain the system** during certain situations, e.g., dunkelflaute, kaltedunkelflaute

Increase of CH4 projects collected for the TYNDP 2026….

Key conclusions from TYNDP 2024

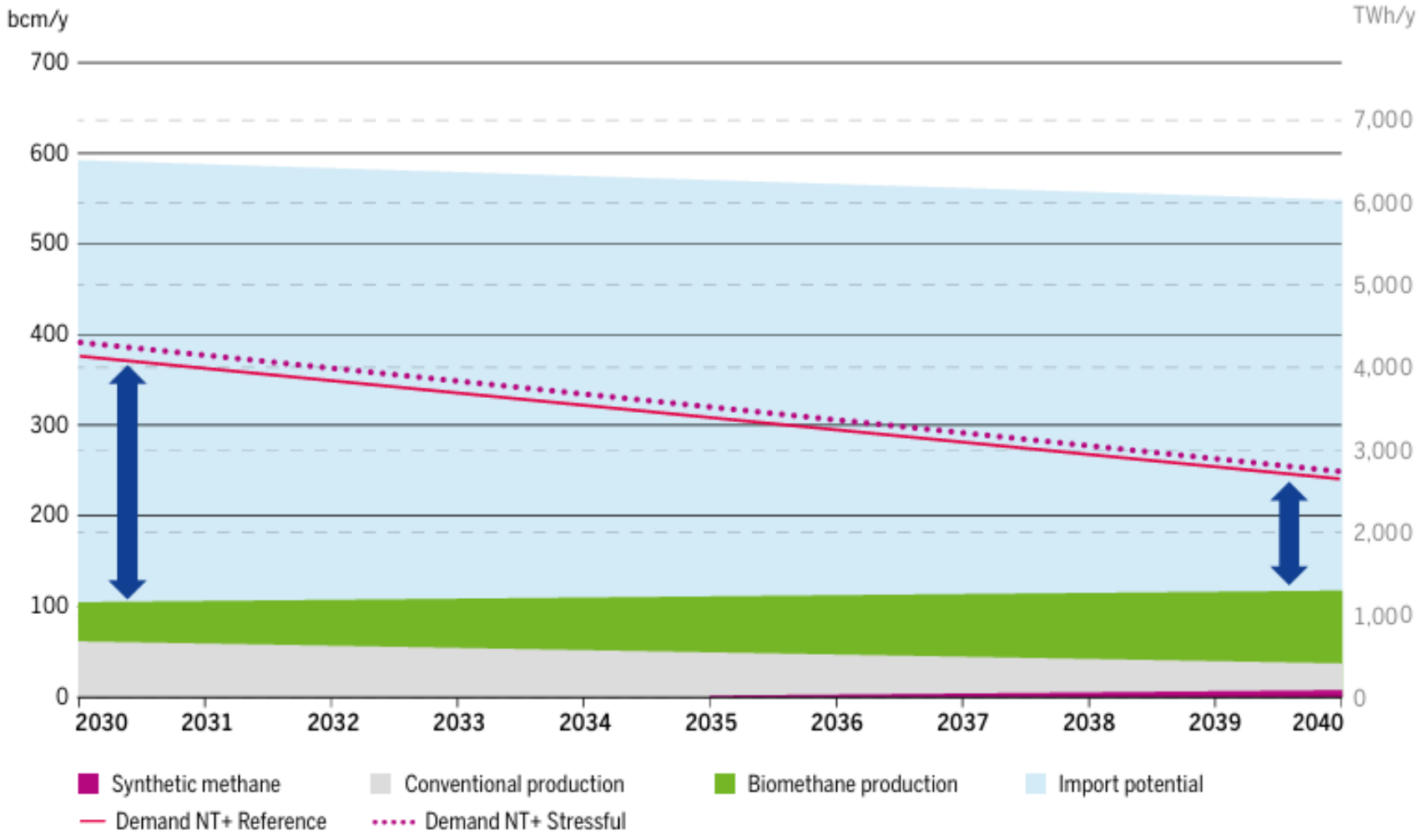
Market and regulatory support is essential to unlock biomethane's system benefits.



National Trends scenario foresees that in 2040:

- The overall production of renewable gases as sufficient to offset the decline in conventional natural gas production
- Biomethane supply is aligned with the level in the EU impact assessment.

Initial insights Biomethane in long-term assessments



Biomethane is scaling up, but system integration is now the main challenge…

- Volumes increase across all TYNDP 2024 scenarios
- Still below 2030 REPowerEU target
- Regional disparities persist

Thank you for your attention

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