

WEBINAR

Decarbonisation of the
EU's natural gas market

Thursday, 24.09.2026

10:00 - 11:00 CEST

Online



www.acer.europa.eu

Time	Topic and speakers
10:00 - 10:05	Introductory remarks Bart VEREECKE, ACER
10:05 - 10:15	Presentation - Decarbonising the EU's natural gas market Ricardo FERNANDEZ, ACER David SILVA, ACER
10:15 - 10:35	Panel discussion - Gas decarbonisation: Solving the energy trilemma? Moderator: Joaquin GARCIA, ACER Giusi SQUICCIARINI, Energy Traders Europe Georg ZACHMANN, Bruegel/HZB Maria OLCZAK, Oxford Institute for Energy Studies
10:35 - 10:55	Q&A
10:55 - 11:00	Closing remarks Bart VEREECKE, ACER

Housekeeping rules



Questions shall be posed using the Slido tool

Use the direct link:
<https://app.sli.do/event/oeEPm2MFwAHqx9SnL4fMxF>



Slides and video recording from this webinar will be uploaded to ACER website



Keep your microphone muted unless the chair gives you the floor

Questions from other participants can be 'liked' to increase their visibility



Substance-related questions will be addressed during the relevant Q&A session; although they can be posed at any point



Q&A session

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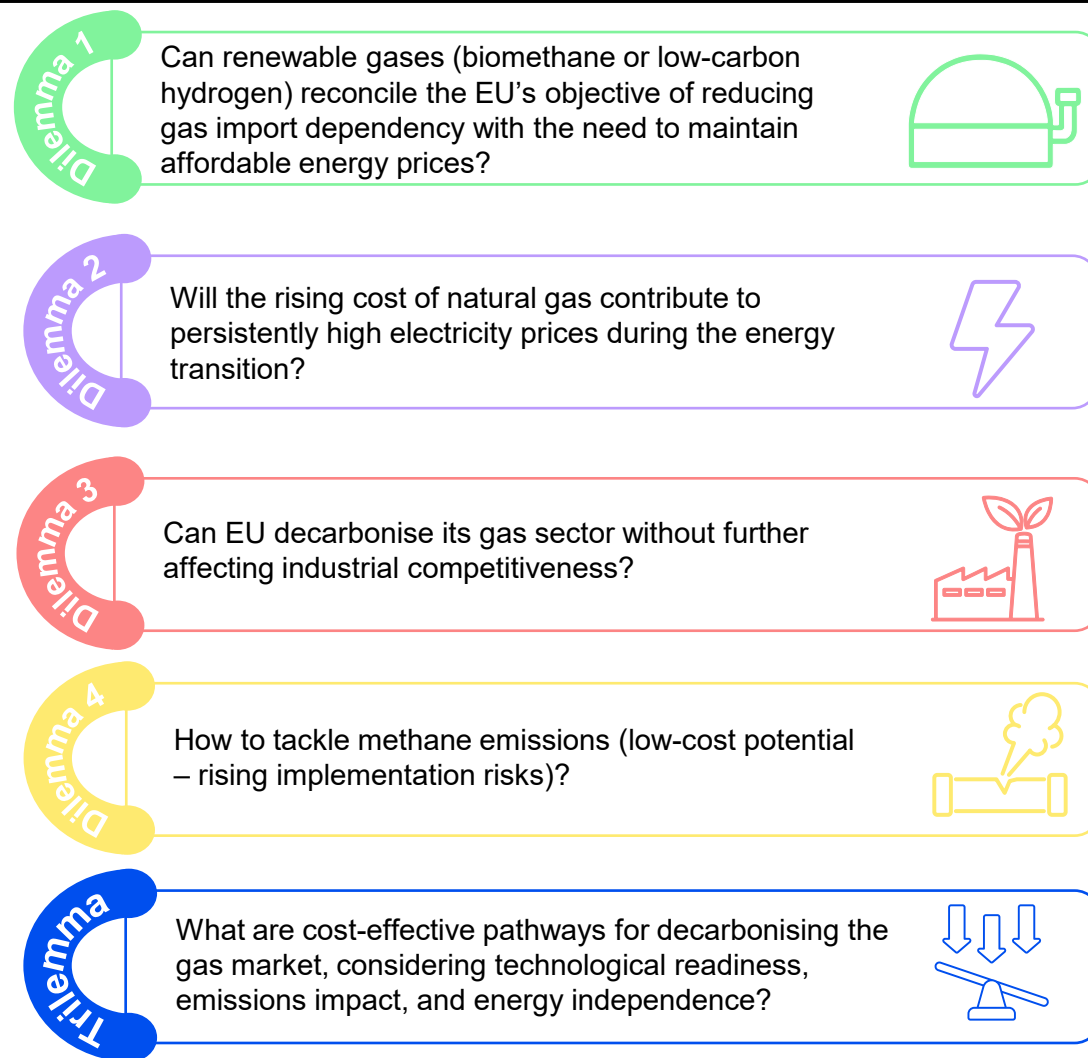
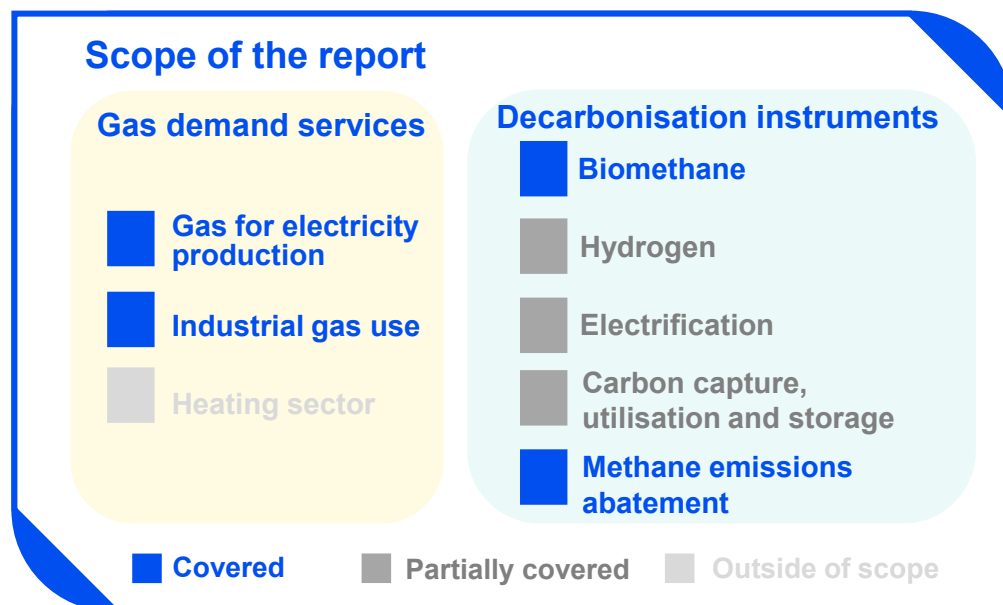
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Introductory remarks

Bart VEREECKE, ACER

Introduction: Report on decarbonising the EU gas market



EU gas decarbonisation: Status and challenges

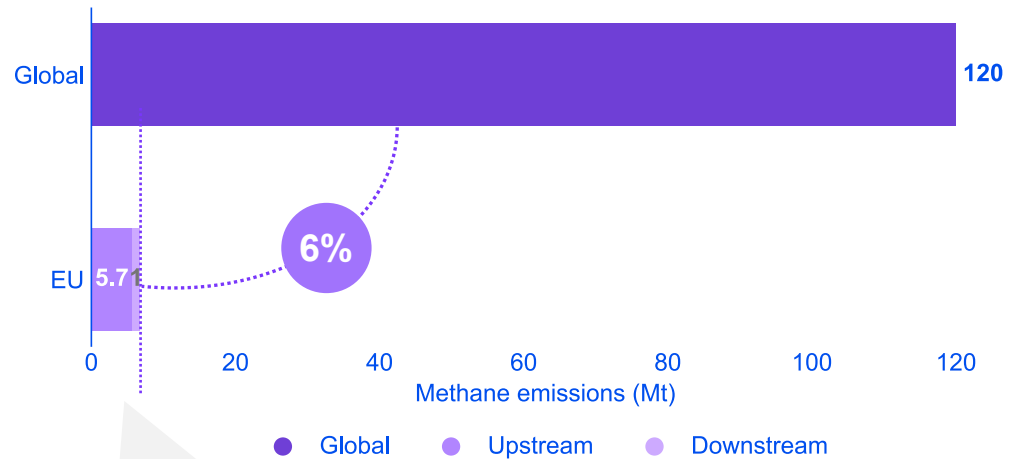
Ricardo FERNANDEZ, ACER

David SILVA, ACER

EU gas decarbonisation: Status and challenges

Decarbonising the gas sector is a key opportunity to support EU's climate neutrality

Global energy-related methane emissions and EU methane emissions associated with oil and natural gas consumption, 2024 (Mt of methane)



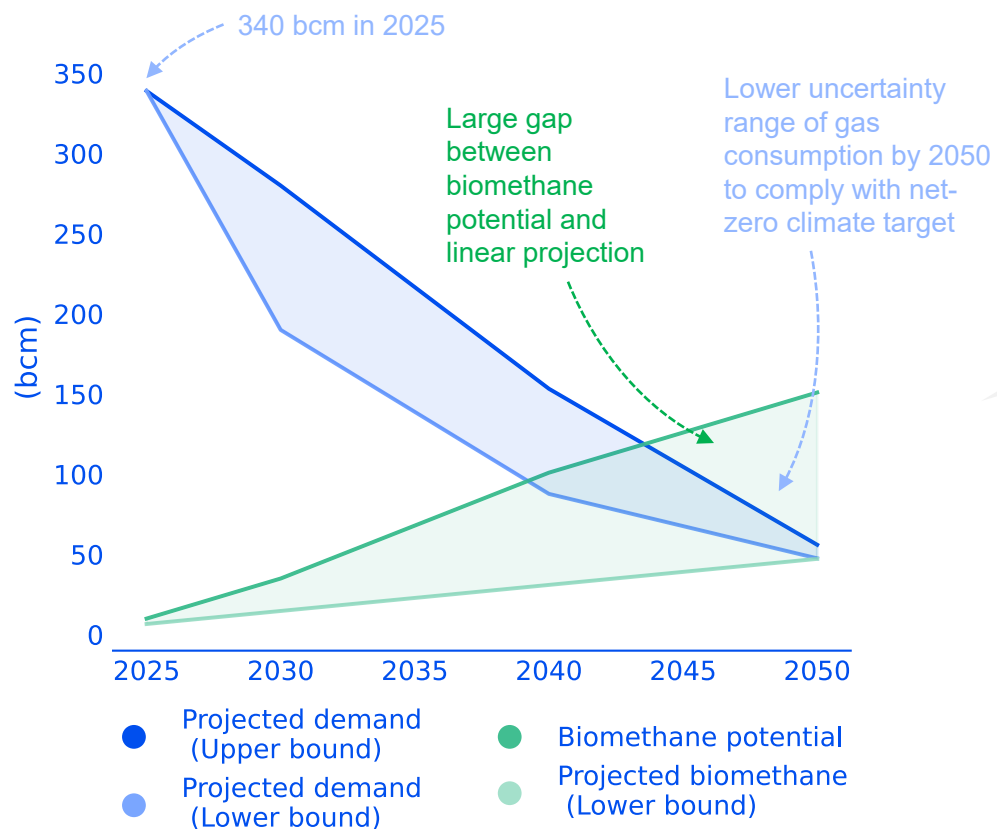
85% of EU's attributable methane emissions originates outside the EU.

Challenges rest on three pillars: sustainability, supply security and competitiveness/affordability



Gas demand expected to decrease during the energy transition

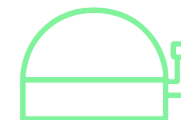
Gas consumption vs biomethane production potential, 2025-2050 (bcm)



Domestically-produced biomethane accounts for only a small share of total EU gas supply (2% in 2024).

Dilemma 1

Can renewable gases (biomethane or low-carbon hydrogen) reconcile the EU's objective of reducing gas import dependency with the need to maintain affordable energy prices?

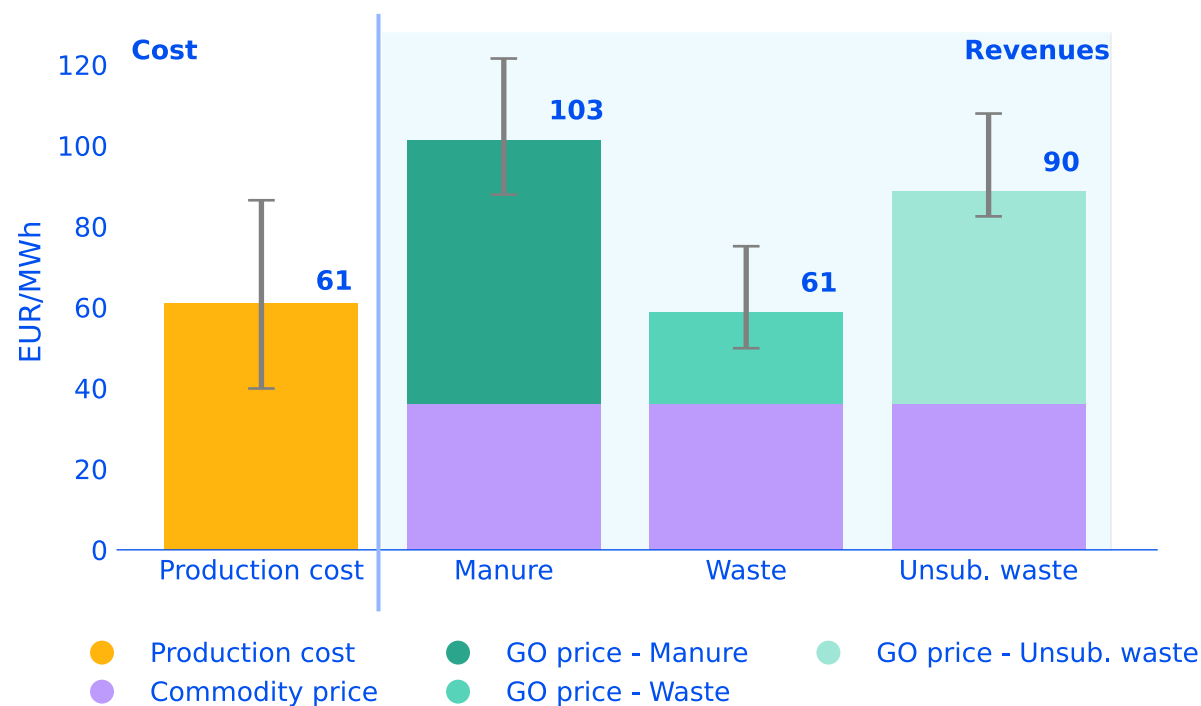


Biomethane certificates can offset its production costs ...

... but guarantees of origin/proof of sustainability certificates depend strongly on feedstock type, support schemes and end-use markets

Biomethane production costs, commodity price [gas], and GO prices*, 2025 (EUR/MWh)

Cross-border traded volumes of biomethane certificates represent just 5% of total biomethane production in the EU.



Source: ACER based on S&P Global, ICIS, EEX, IEA, and [The Oxford Institute for Energy Studies, January 2026](#).

Note: Biomethane production costs include CAPEX, OPEX, and feedstock. Commodity price refers to gas day-ahead TTF price. GO prices for manure- and waste-derived biomethane are taken from 2025 markets in DK, NL, and DE. Subsidies are excluded from the stacking of revenues. "Unsub." stands for "Unsubsidised". * GO prices refer to the price of GO and proof of sustainability certificates.

Increased renewables impacts operation of gas power plants

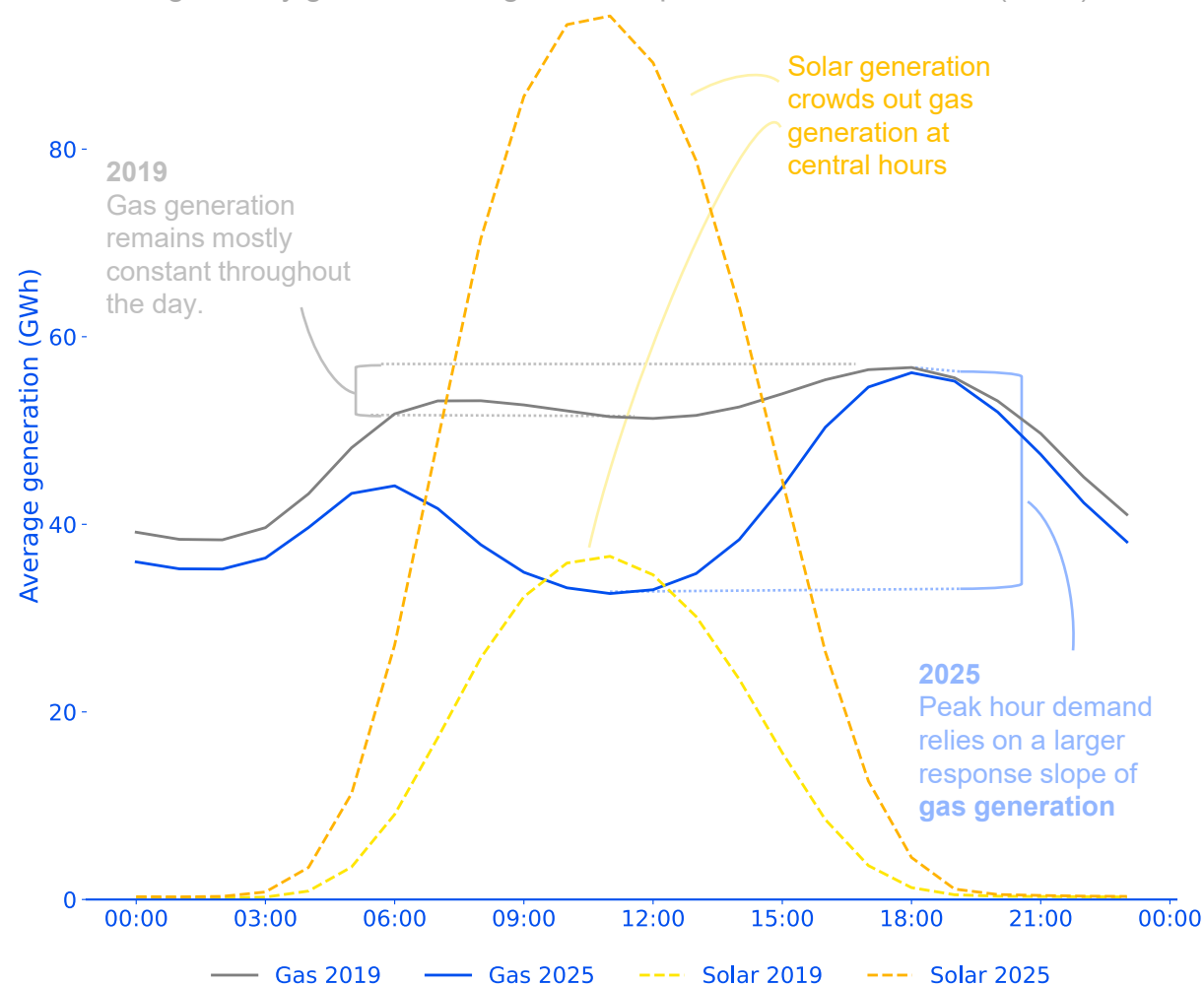
Dilemma 2

Will the rising cost of natural gas contribute to persistently high electricity prices during the energy transition?



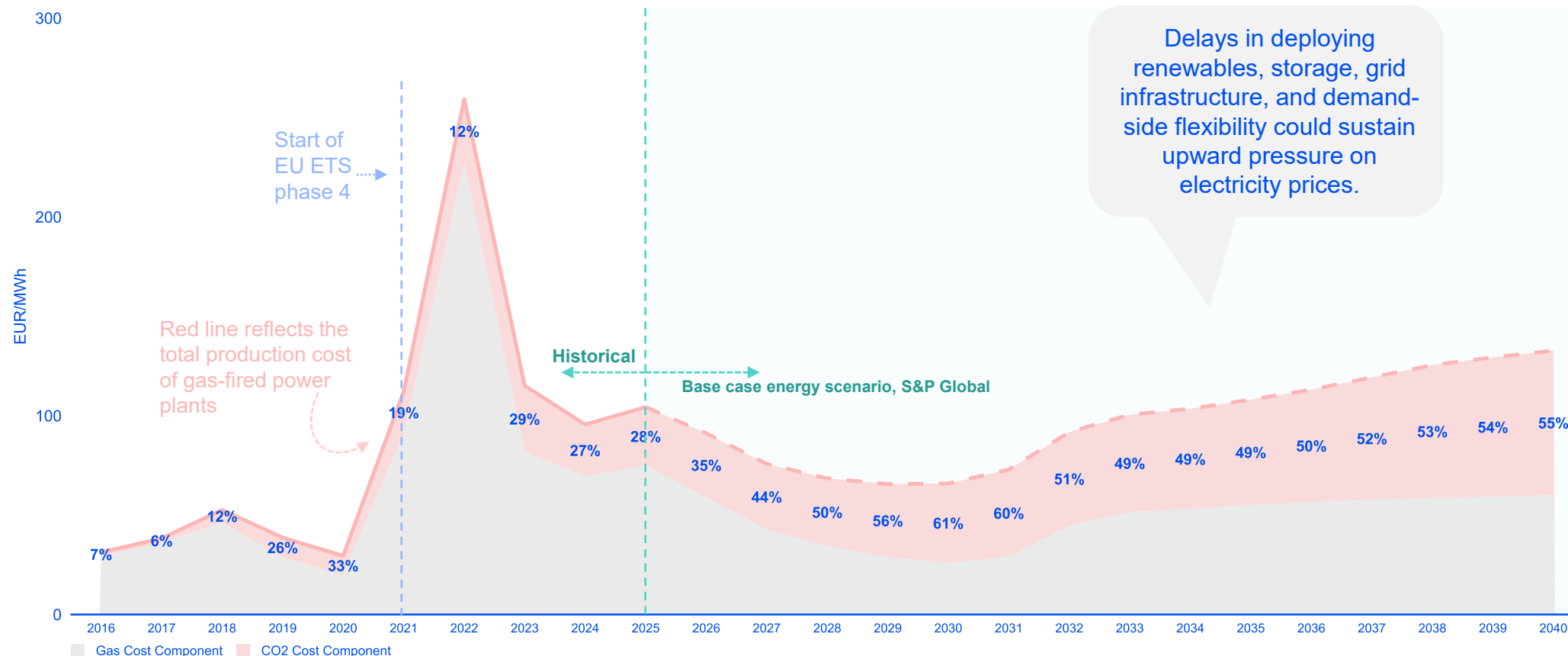
Solar is increasingly crowding out gas generation during midday hours, creating a duck-curve pattern.

Average hourly gas and solar generation profiles, 2019 and 2025 (GWh)



... but timely rollout of renewables and non-fossil flexibility solutions is essential

Production costs of gas-fired power plants (EUR/MWh), 2016-2040



Source: ACER calculations based on ENTSO-E Transparency Platform and ICIS.

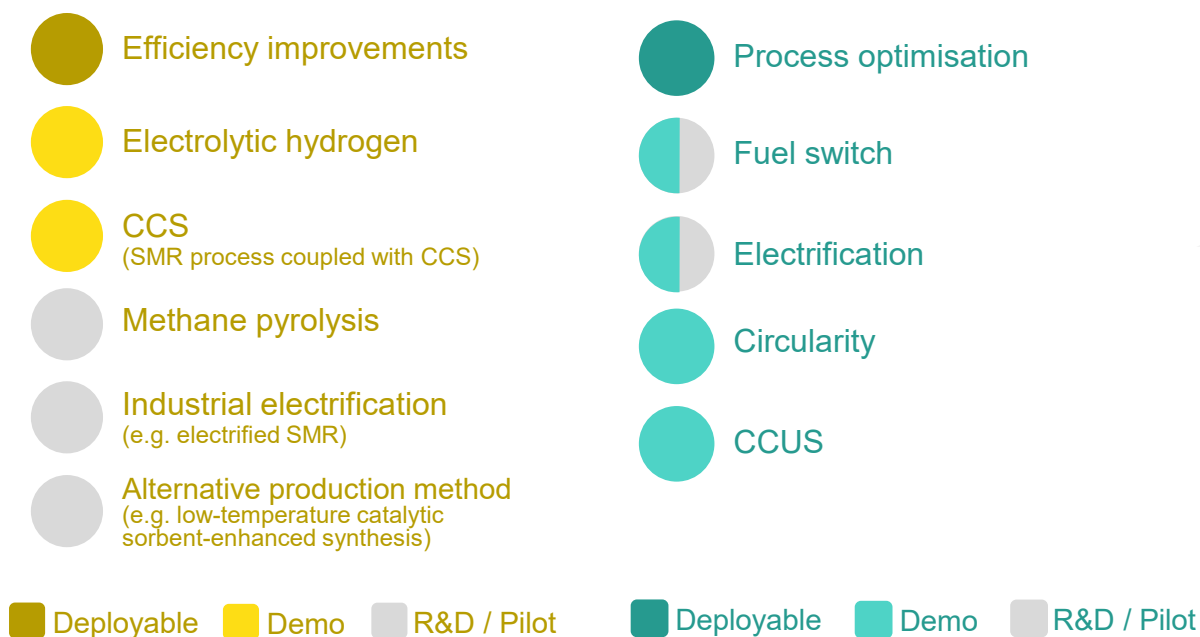
Note: The plot reflects the evolution of gas production costs for the base case energy scenario of S&P Global. ACER does not model this energy scenario, and this may be subject to change.

Note 1: See [Key developments in EU electricity and gas markets](#)

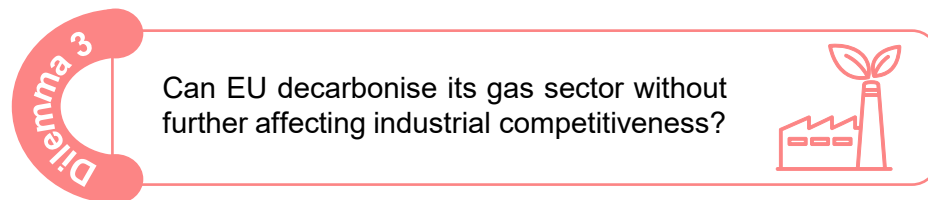
Decarbonisation pathways differ across sectors

One-third of EU industrial energy demand is met by gas, while industrial energy use has fallen 12% in 2023 compared to 2021. Global competitiveness will be a key driver of future gas demand

Stage of development of decarbonisation levers for the ammonia production sector (left) and glass industry (right)



Some decarbonisation instruments for two types of industries. Relative gas prices, carbon costs and trade exposure may influence industrial activity and investment decisions.



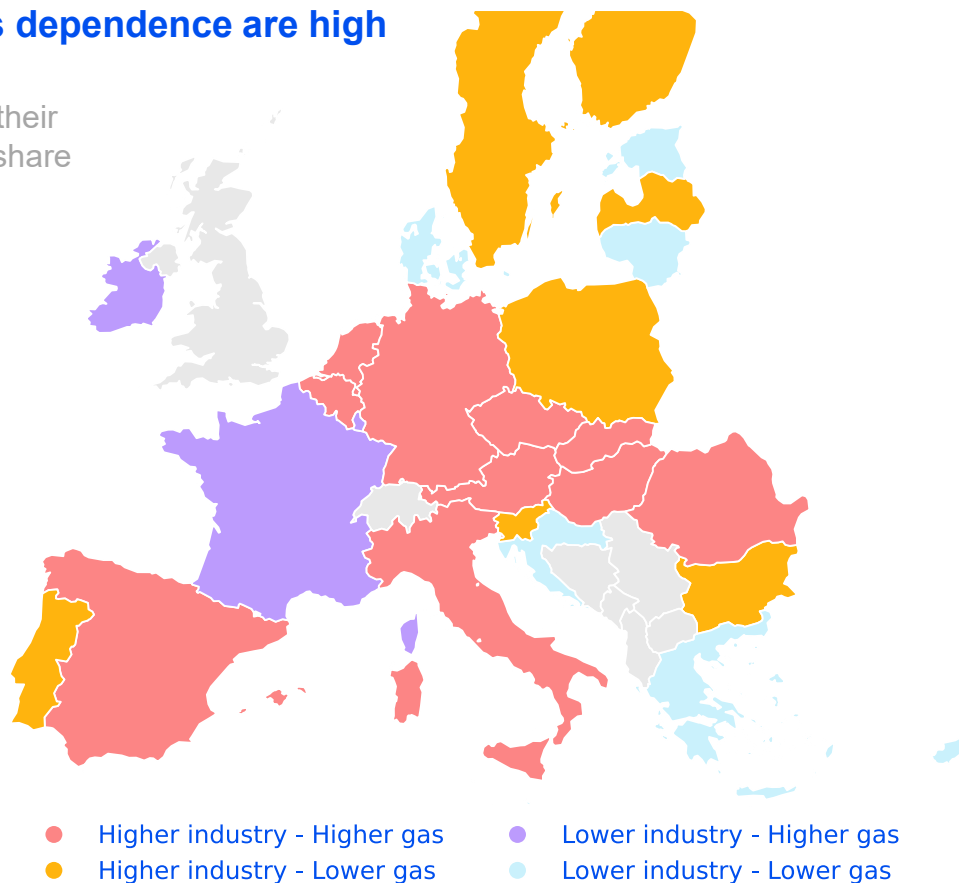
Source: ACER based on [JRC energy-intensive industry factsheets](#).

*SMR stands for steam methane reforming, a process that produces hydrogen and carbon monoxide by reacting hydrocarbons, typically natural gas, with steam. CCS for carbon capture and storage. R&D for research and development. For SMR+CCS, costs include transport and storage. **Other decarbonisation technologies are emerging but still need development before full commercialisation.

Industry's relative reliance on gas shapes decarbonisation

Decarbonisation is challenging for all countries. But it poses greater risks to industrial competitiveness where both industrial importance and gas dependence are high

Classification* of Member States based on their share of industrial energy demand and the share of natural gas in final energy consumption



Countries' exposure to the energy transition depends on how their economies rely on industry and how dependent they are on natural gas.

Methane regulation: Implications for EU security of supply

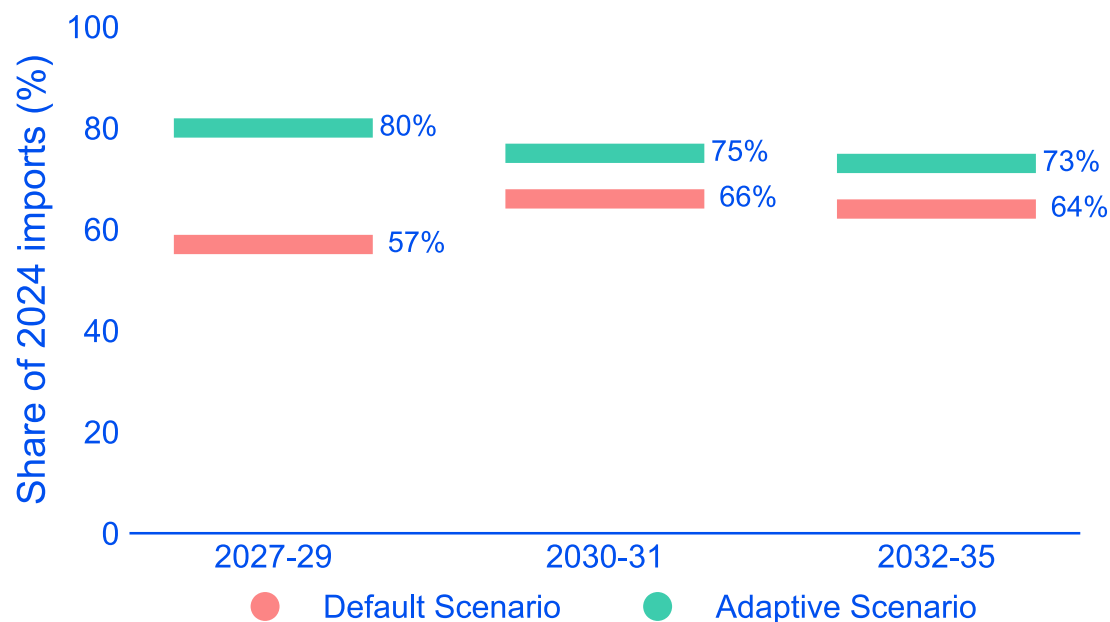
While global compliant gas supply with the methane emissions regulation is projected to increase by 2027, the industry highlights potential security-of-supply concerns...

Dilemma 4

Tackling methane emissions: low-cost abatement – rising implementation risks)?



Methane-emissions-regulation compliant EU gas/LNG imports** (%)



... but these will depend on how implementation rules are designed, particularly whether certain flexibilities are retained

Implementing the methane regulation could constrain the EU's ability to import natural gas, but Article 33 of the regulation requires Member States to weigh clearly aggravating and mitigating factors.

Source: ACER based on the results from this industry-lead study: [Wood Mackenzie study](#).

* [Wood Mackenzie study](#) ** These figures result from the modelling of alternative policy enforcement scenarios. Default scenario: regulation is enforced as it was adopted in 2024. Adaptive scenario: modifications introduced to regulation allowing for greater flexibility in granting country-level MRV equivalence, prioritising security of supply.

Panel discussion

Gas decarbonisation: Solving the energy trilemma?

Moderator: Joaquin GARCIA, ACER

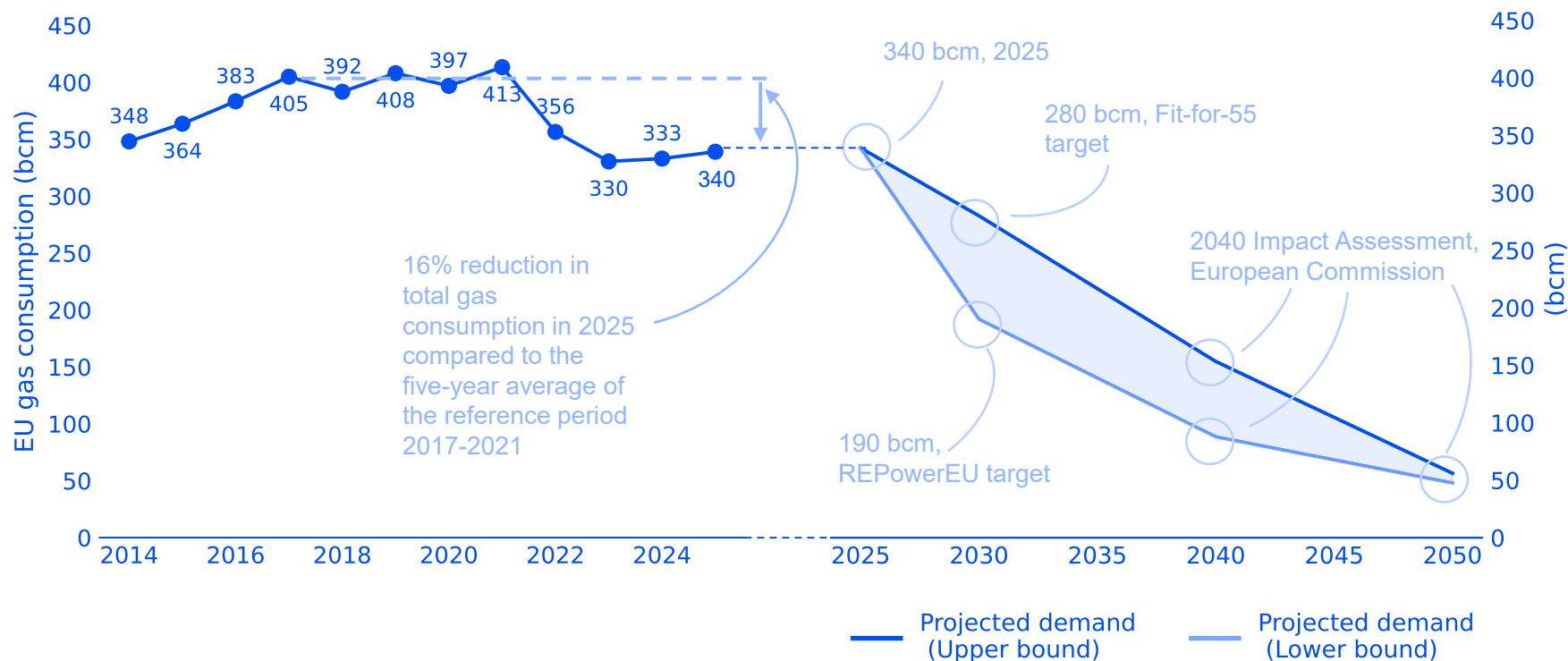
Panellists:

- Giusi SQUICCIARINI, Energy Traders Europe
- Georg ZACHMANN, Bruegel/HZB
- Maria OLCZAK, Oxford Institute for Energy Studies

EU gas demand reduction has stalled in the last years

In the absence of stronger decarbonisation efforts, the envisaged conventional gas consumption reductions by 2030 are at risk

Historical gas consumption in the EU, 2014-2025 (bcm) and projected gas consumption under various decarbonisation scenarios, 2026-2050 (bcm)



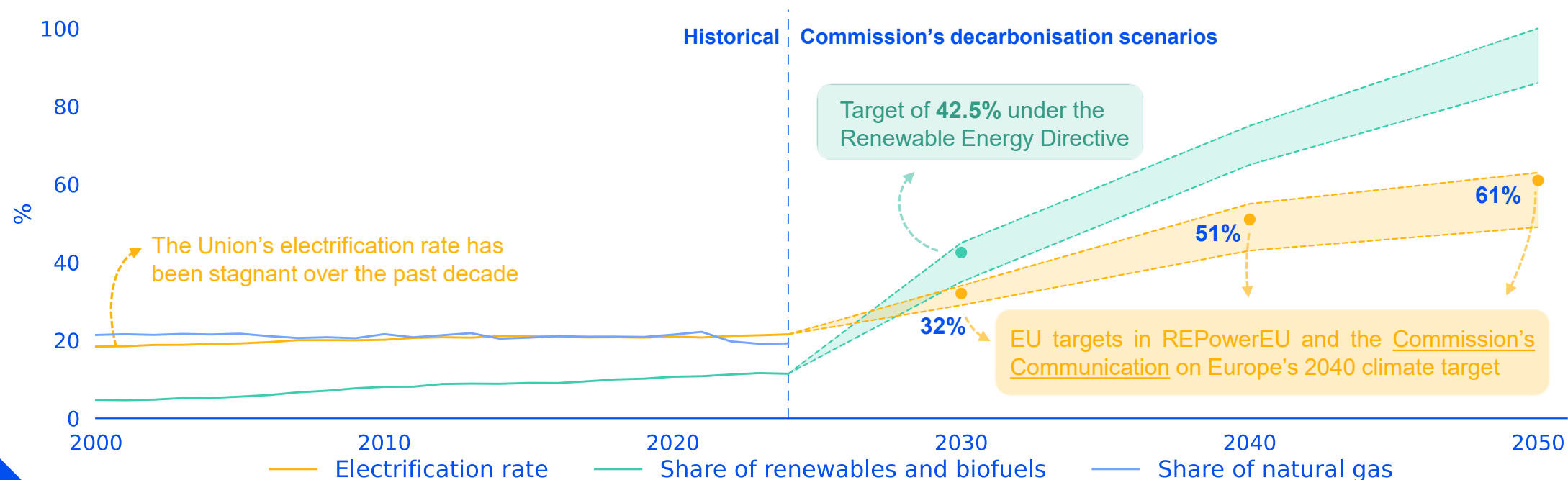
Source: ACER calculations based on Eurostat, [EC's impact assessment for the 2040 climate target](#).

Note: Fit-for-55 implies a 32% reduction in natural gas demand compared to 2019, while the most ambitious REPowerEU scenario (without considering the gas savings related to renewable hydrogen targets) projects gas demand 32% below the Fit-for-55 level.

Electrification action plan: 46% indicative target realistic?

Electrification rate of the EU slightly increased, gas use decreased and renewables increased steadily in past years

Share of electricity, natural gas and renewables/biofuels of the final energy and non-energy consumption in EU, 2000-2024 (historical) and 2025-2050 (scenarios)

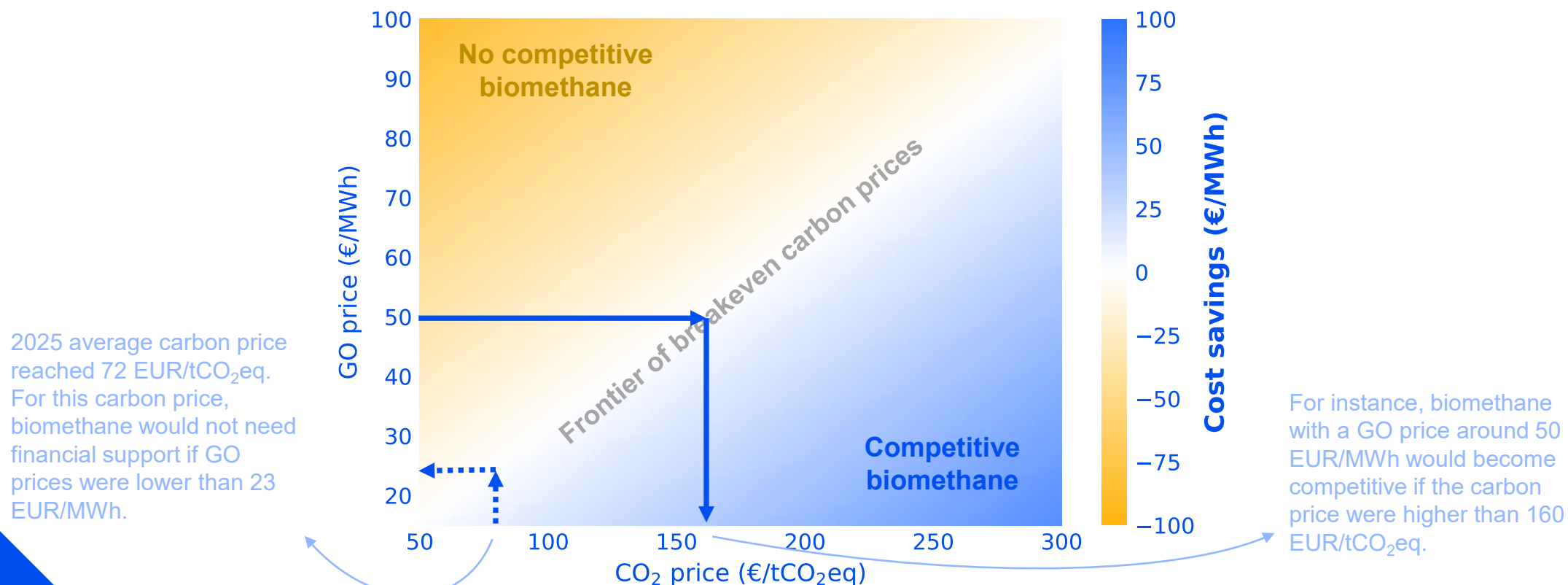


Source: ACER based on Eurostat and EC's 2040 impact assessment.

Note: The electrification rate is the share of electricity in final energy and non-energy consumption, and it measures the extent to which the energy sector relies on electricity rather than direct fossil fuel combustion. If linked to grid decarbonisation, electrification can deliver significant emissions reductions. Electrification will be further analysed in future ACER's reports.

Biomethane's guarantees of origin (GO)* prices relative to carbon prices are key to its competitiveness

Cost savings of an industry fully compliant with ETS including carbon prices for natural gas and GO prices for biomethane (EUR/MWh)



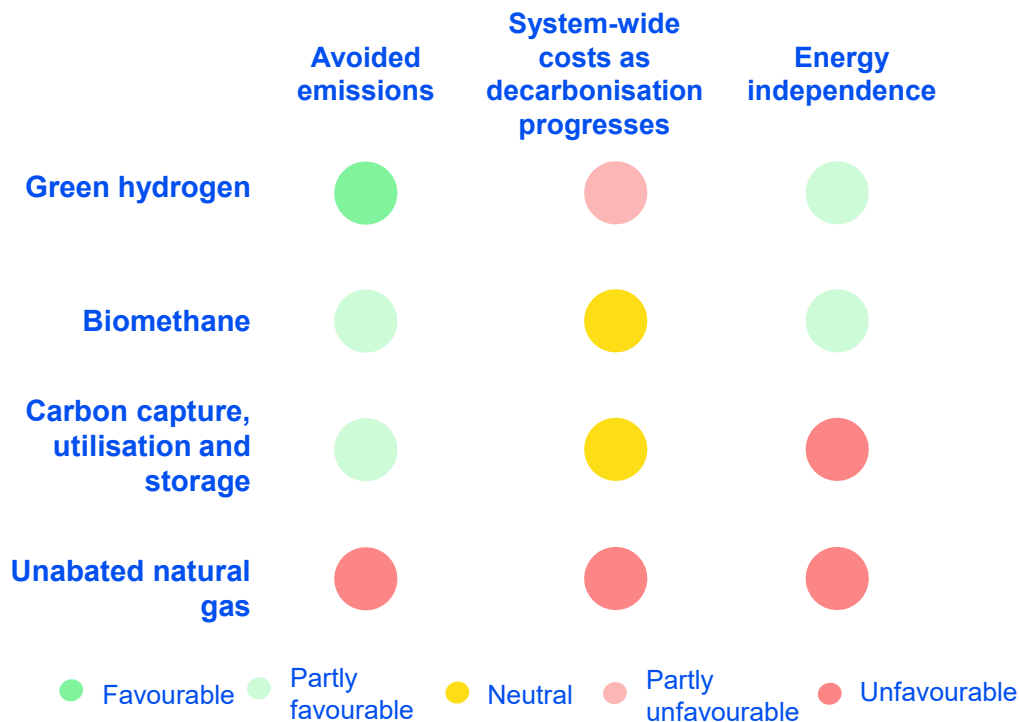
Source: ACER based on S&P Global, ICIS, and EEX.

Note: See consideration (2) in [Annex C](#).

* Guarantees of origin prices refer to the price of guarantees of origin and proof of sustainability certificates.

Coordinated planning and regulatory alignment are essential

Qualitative assessment² leaning towards certain decarbonisation instruments



Disclaimer 1: these considerations represent a certain temporal snapshot in the mid-term and are subject to changes in the future.

Disclaimer 2: electrification is assumed to be a baseline condition across all assessed hypothetical pathways.

European climate and energy policies need to reconcile climate, security of supply and competitiveness

- Various technological options are available for decarbonising the EU gas market, including electrification, biomethane, carbon capture, utilisation and storage, and hydrogen. Each involves trade-offs between costs, emissions reductions and energy independence.
- Inaction deploying new technologies may lead to costly outcomes¹. Coordinated infrastructure planning and regulatory alignment will be essential to integrate gas, electricity and hydrogen systems efficiently and address potential mismatches.

¹ Maintaining a strong dependence on unabated natural gas risks generating high system-wide costs as carbon prices are expected to rise, limited decarbonisation gains, and continued import dependence.

Q&A session

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Closing remarks

Bart VEREECKE, ACER

Guiding actions: Decarbonisation of the gas market



Unlock EU's biomethane potential



**Promote low-carbon gas supply options
to cover electricity system needs**



**Harmonise tradability of
certificates for biomethane**



**Reduce regulatory and contractual
uncertainty in methane emissions
regulation**



**Make carbon pricing work for
climate and EU industry**



Strengthen cross-sector coordination

Thank you.

The contents of this document do not necessarily reflect the position or opinion of the Agency.



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