



# Biomethane: a global stocktake

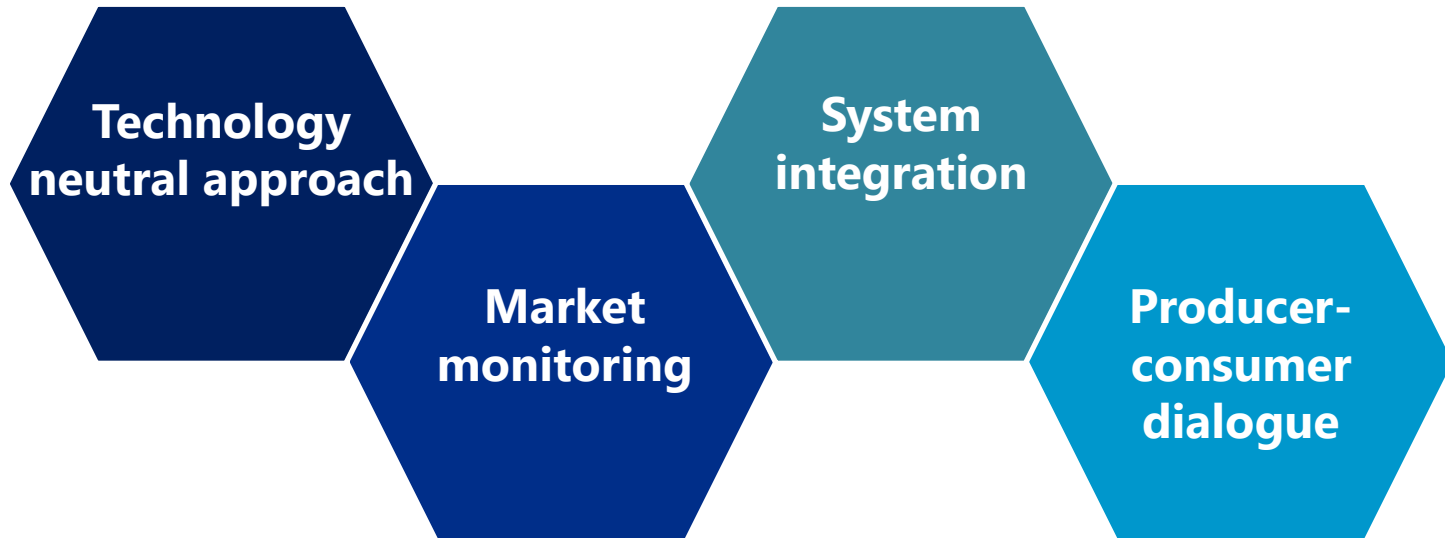
Gergely MOLNAR, Gas Analyst

IEA Low-emissions Gases Work Programme, 20 November 2024

# IEA Low-emissions Gases Work Programme

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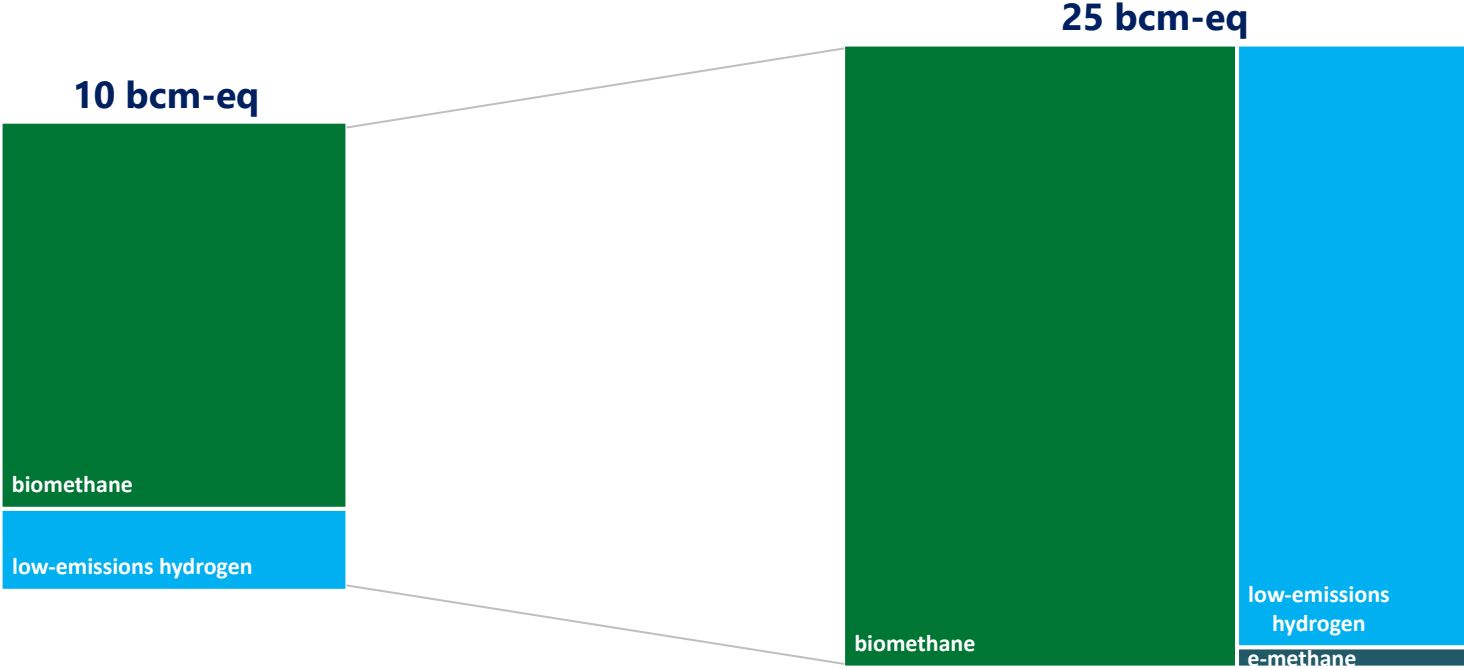
Key pillars of the IEA Low-emissions Gases Work Programme



# Low-emissions gases are set for a rapid growth

Estimated supply of low-emissions gases by type in 2023

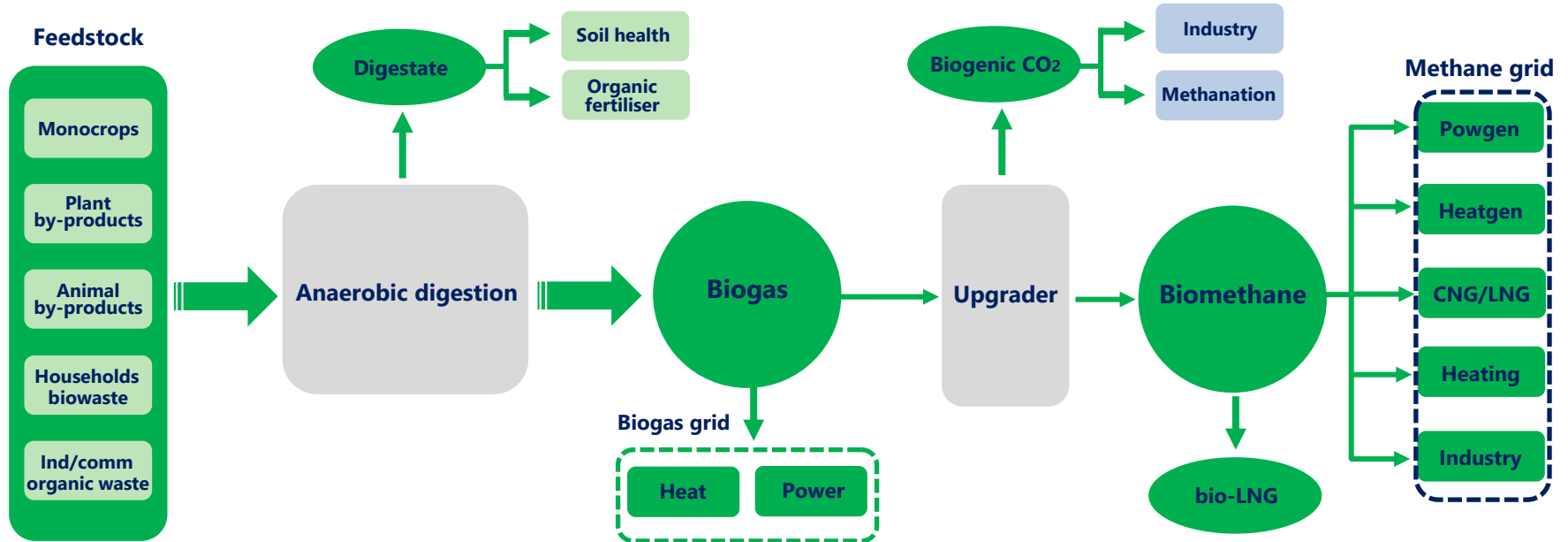
Forecasted supply of low-emissions gases by type in 2027



Low-emissions gases are expected to more than double in the medium-term. Nevertheless, further efforts are required to reach the ambitious targets set by governments.

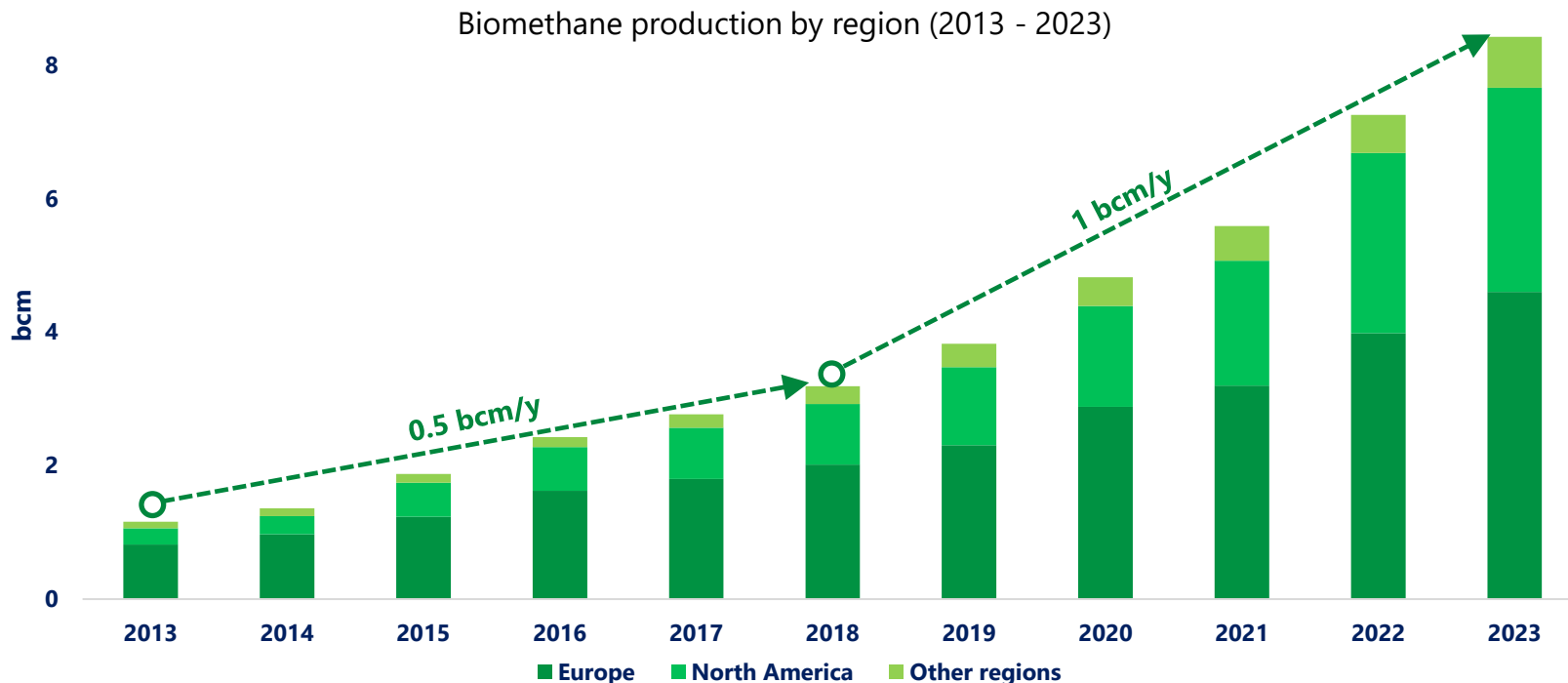
# The biomethane value chain: positive externalities beyond energy

Simplified scheme showing biomethane production from anaerobic digestion



There are various pathways to produce biogas and biomethane. Most commonly, biomethane is produced through a two-step process: biogas obtained from anaerobic digestion is upgraded to biomethane.

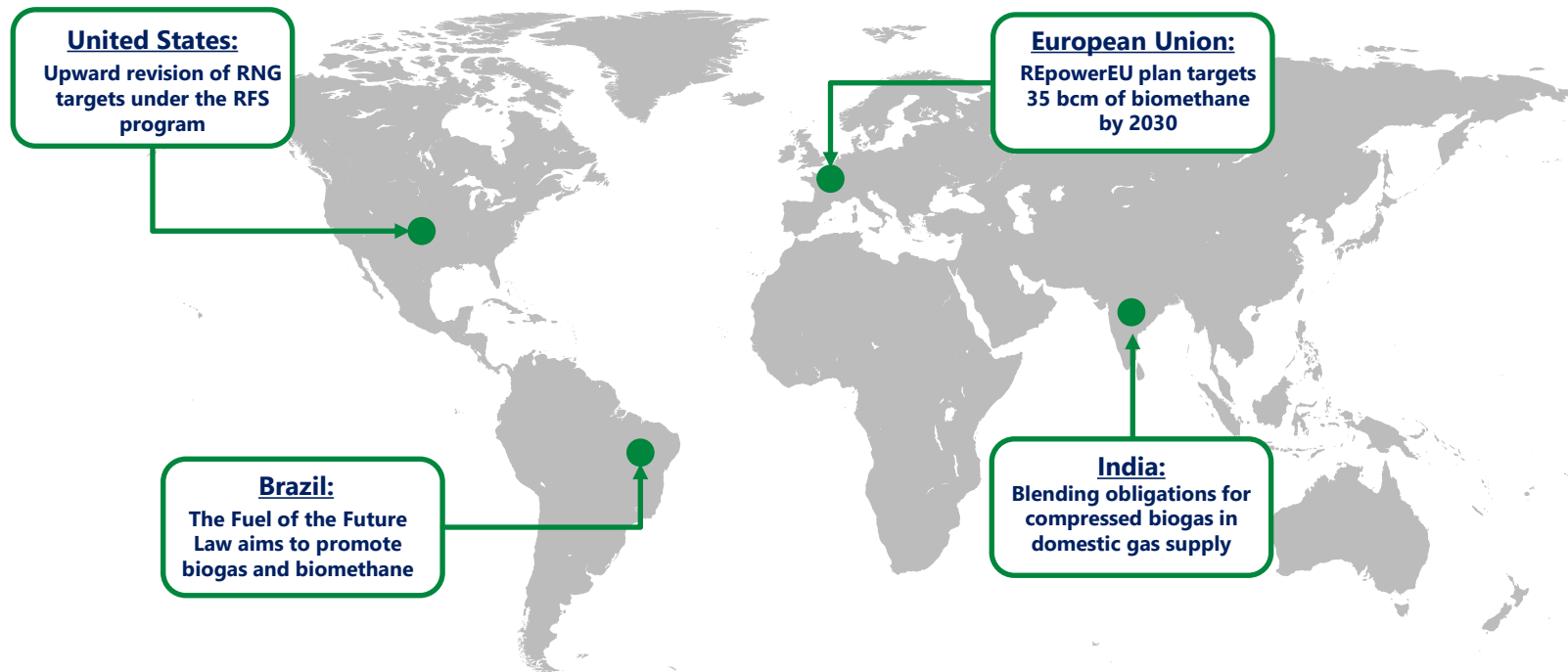
# Biomethane production rose by more than sevenfold since 2013



Global biomethane production increased by over 15% in 2023. The United States and the European Union together accounted for 80% of incremental biomethane supply.

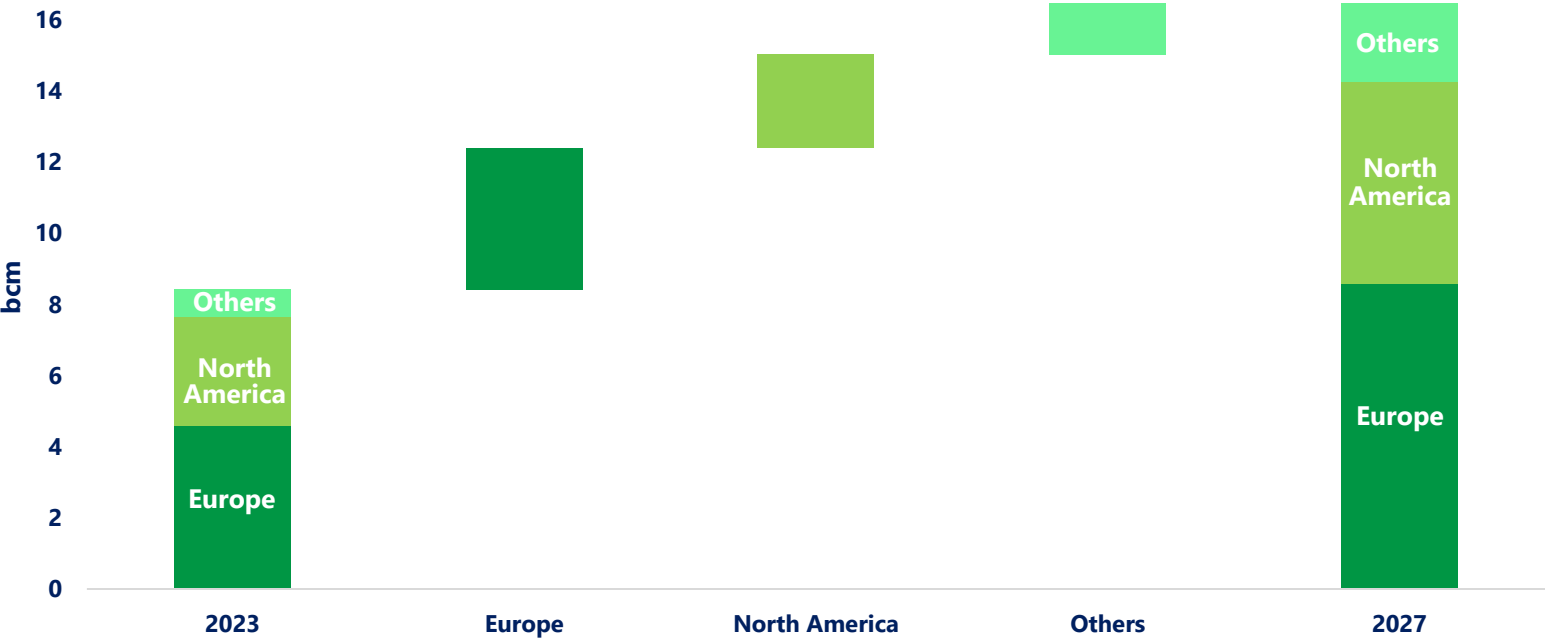
# Policies are key to unleash the full potential of biomethane

Key policies and initiative supporting the development of biomethane



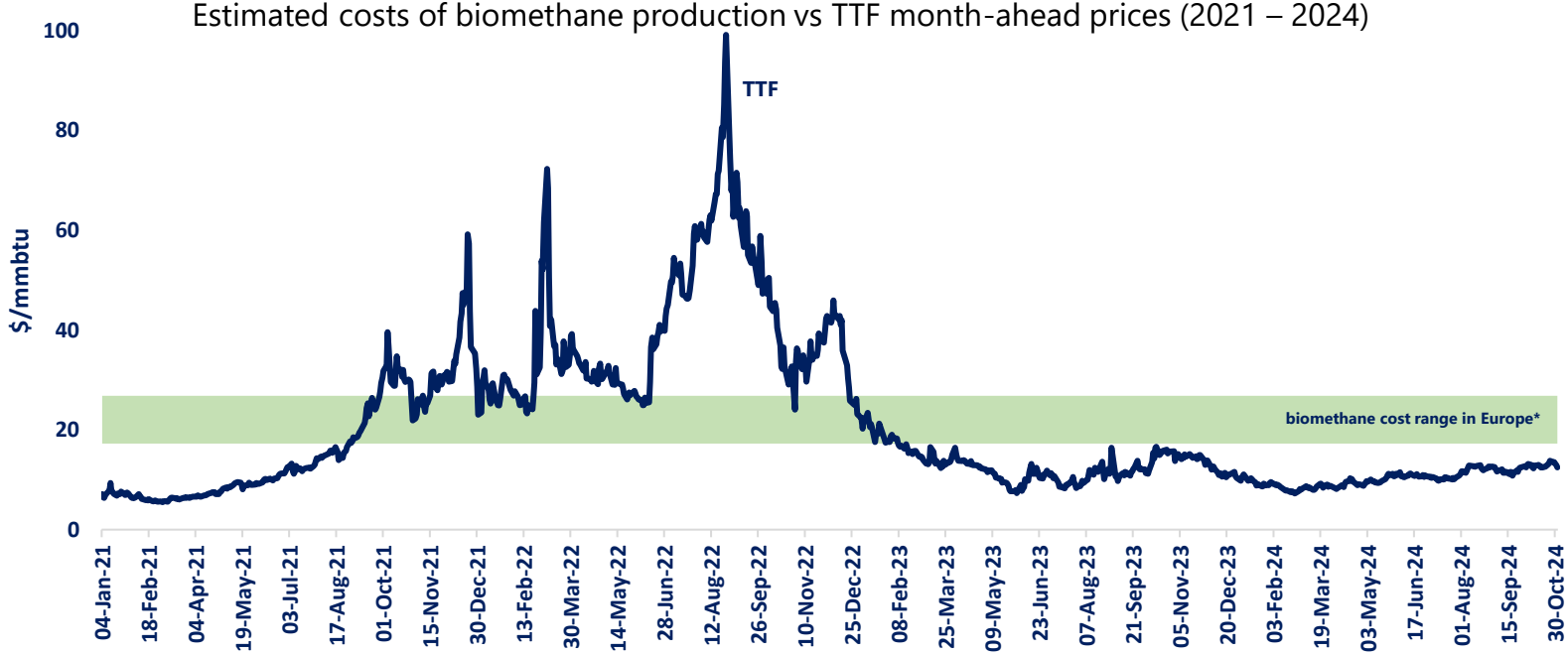
# Biomethane production is expected to double by 2027

Biomethane production by region, 2023 – 2027



Biomethane production is projected to double between 2023 and 2027, primarily supported by projects undertaken in Brazil, Europe, India and North America.

# Biomethane production costs remain relatively high

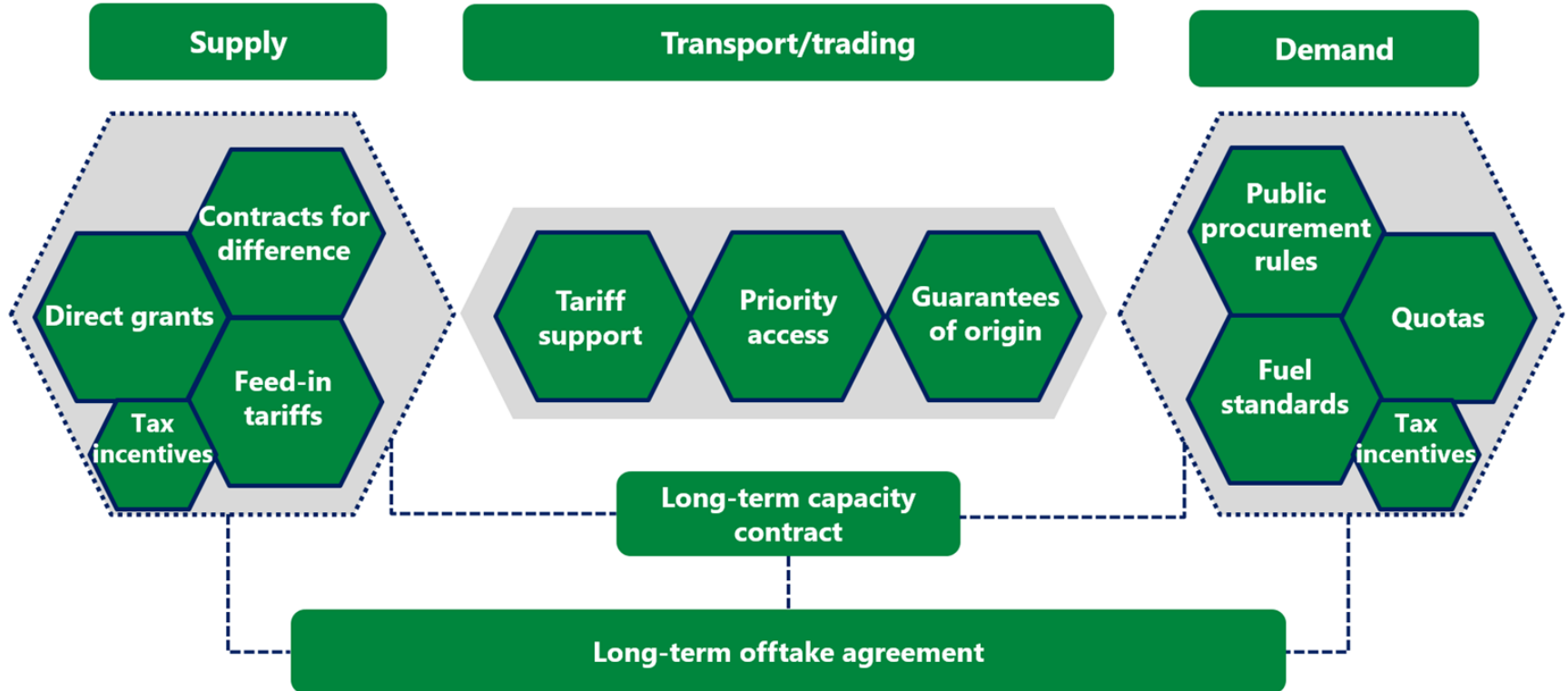


\*based on the survey and analysis carried out by the Biomethane Industrial Partnership (2023).

Biomethane production costs remain significantly above natural gas prices. This highlights the need to reduce production costs, while also better recognise the positive externalities of biomethane.



# Scaling-up biomethane will require a holistic approach



# Key takeaways

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- **Low-emissions gases** are expected to **more than double** in the medium-term, with **biomethane** alone accounting for more than **half of this growth**.
- **Global biomethane** production **increased by sevenfold since 2013**, with the growth largely dominated by Europe and North America.
- **Biomethane output is projected to double** between 2023 and 2027. Nevertheless, **further efforts** are required to reach the ambitious targets set by governments.
- Biomethane **production costs remain relatively high** compared to gas prices. This highlights the need to reduce production costs, while also better recognise the positive externalities of biomethane.
- Scaling-up biomethane will require a **holistic approach to support mechanisms**, including state-backed risk sharing, priority grid access and demand creation in key end-use sectors.

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