

Biomethane towards 2040

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EBA
European Biogas
Association

A butterfly with orange and black wings is perched on a purple flower in a field. In the background, there is a large building and a clear sky. The image has a green tint and a large white arrow pointing right.

**1.
EBA in a
nutshell**

**2.
TOWARDS
2040**

**3.
BARRIERS
vs
DRIVERS**

EBA – representing the full value chain



Non-exhaustive list of EBA members



EBA National Associations

≤ 300
MEMBERS

250
COMPANIES

50
NATIONAL ASSOCIATIONS

35
COUNTRIES

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18% more biomethane in Europe in 2022

European biomethane production in EU-27 and Europe



21 bcm of biogases in Europe in 2022

> gas demand of Poland

= 6% EU gas consumption



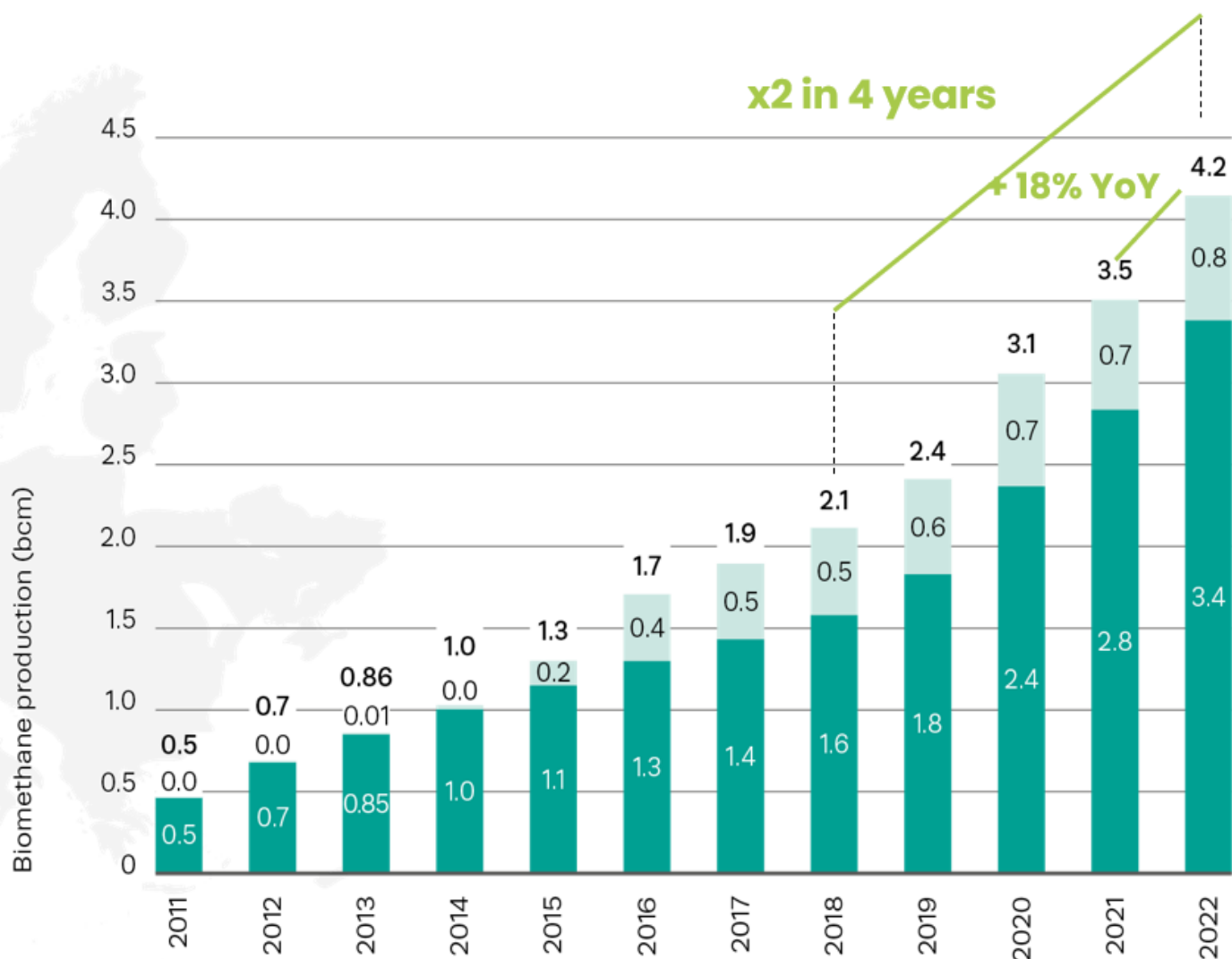
4.2 bcm (3.4 in EU-27)

4.5 bcm installed capacity



x2 production since 2018

France, Italy, Denmark, UK fastest growing countries



Record number of new biomethane plants



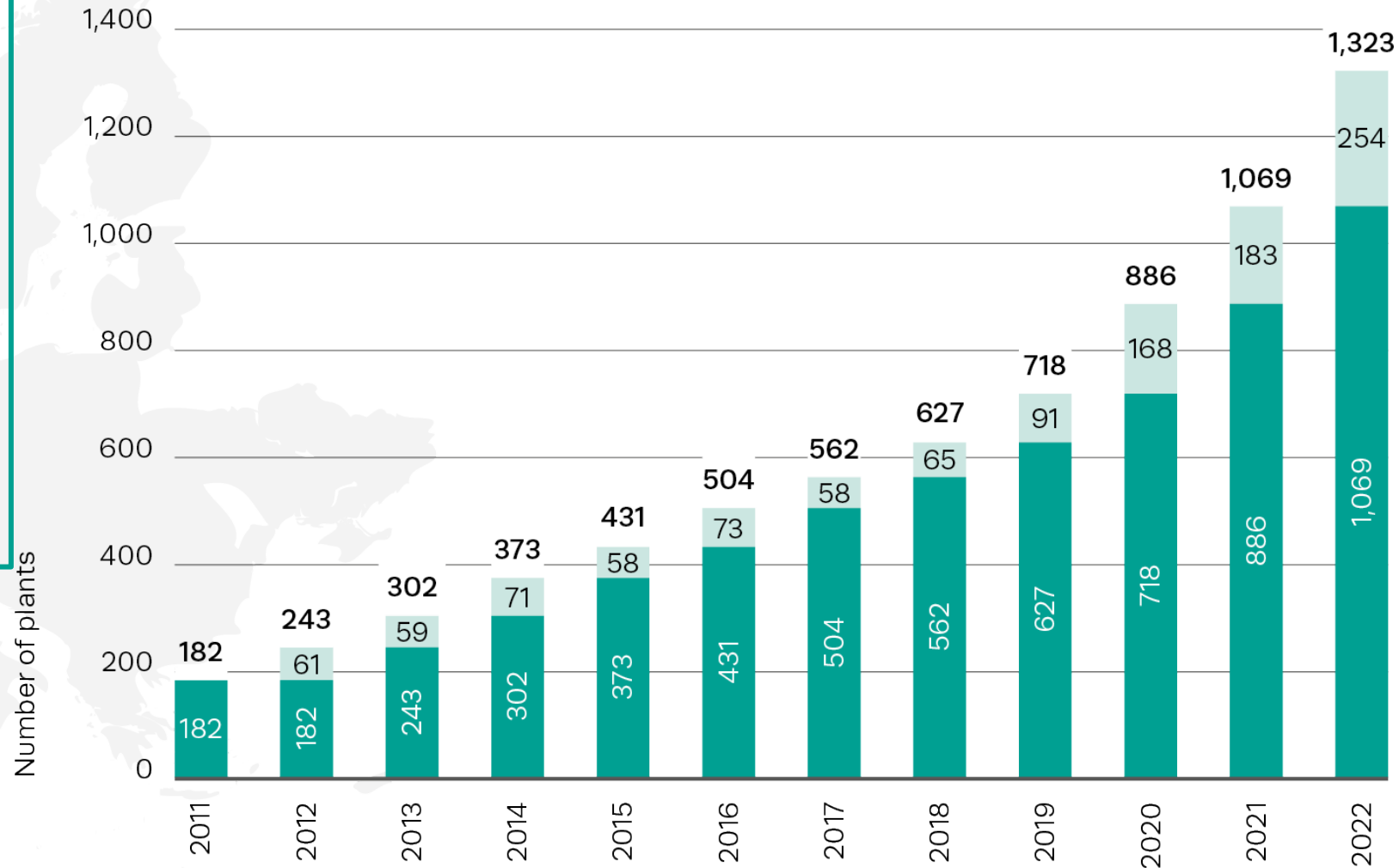
> **250 new plants**
> 1,300 in Europe
(1,124 in EU-27)

24 producing countries

> **75% plants grid connected**, most to distribution grid



Development of number of biomethane plants in Europe

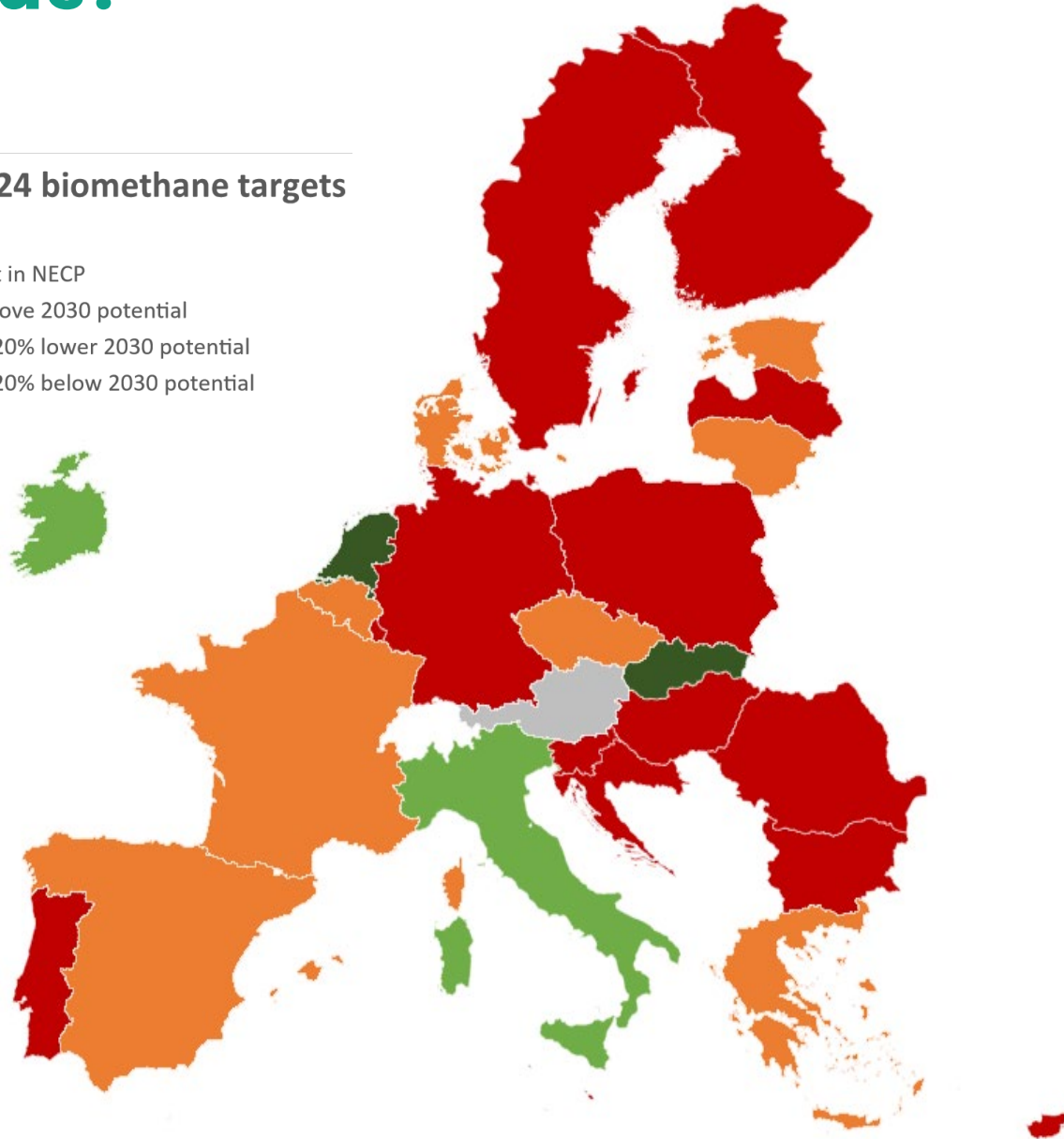


■ Existing plants
■ New plants

NECPs 2030: Is the planned growth ambitious?

Gap analysis NECP 2024 biomethane targets

- NECP not published
- No biomethane target in NECP
- Biomethane target above 2030 potential
- Biomethane target > 20% lower 2030 potential
- Biomethane target < 20% below 2030 potential

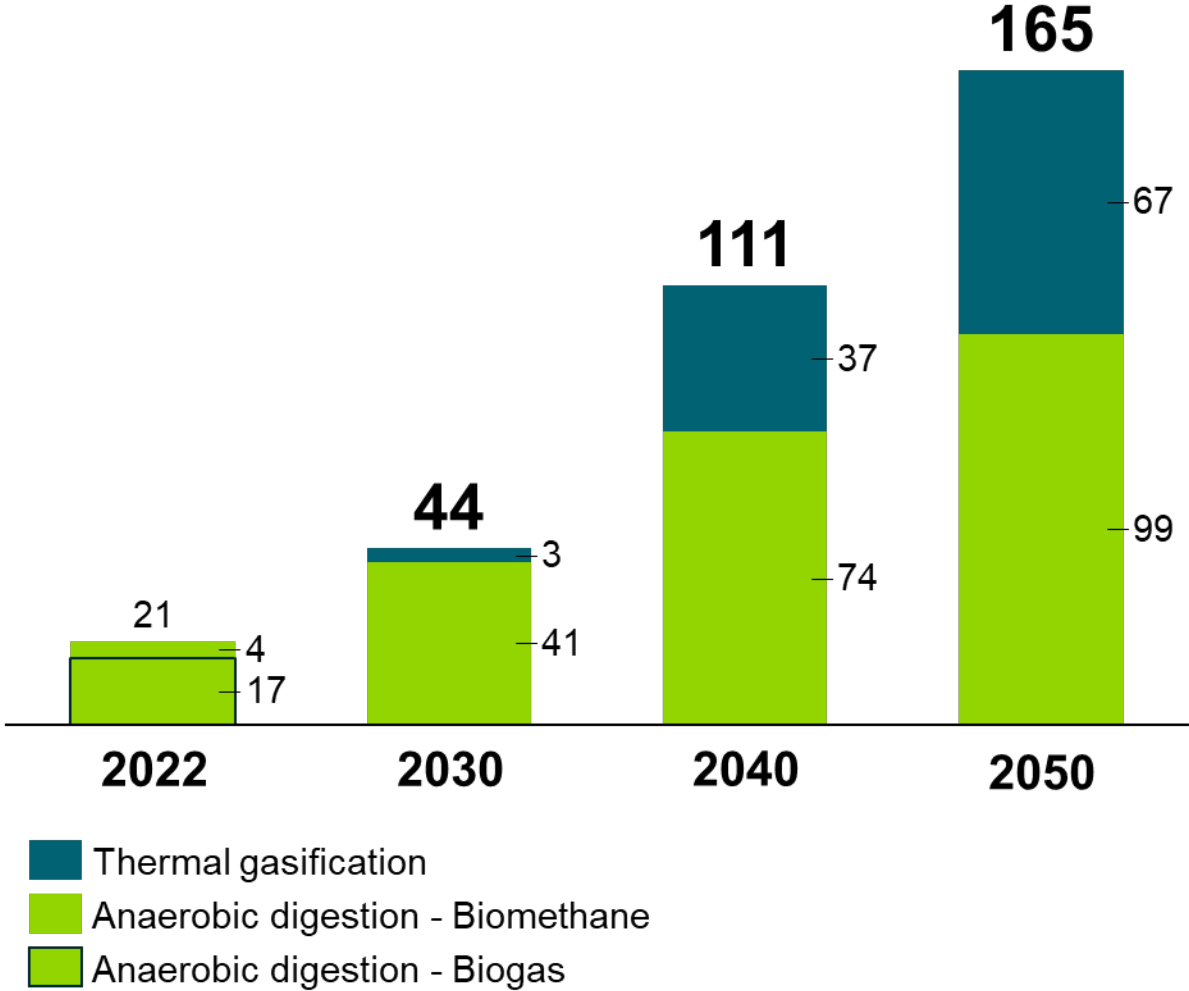


14,16 bcm: Total volume of biomethane committed towards 2030

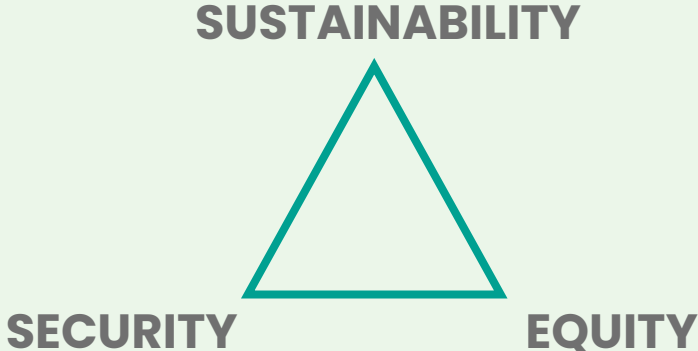
12 countries have a biomethane-only target

17 countries have a biomethane and/or a biogas target

Significant potential to scale-up biomethane production to 2040 and beyond



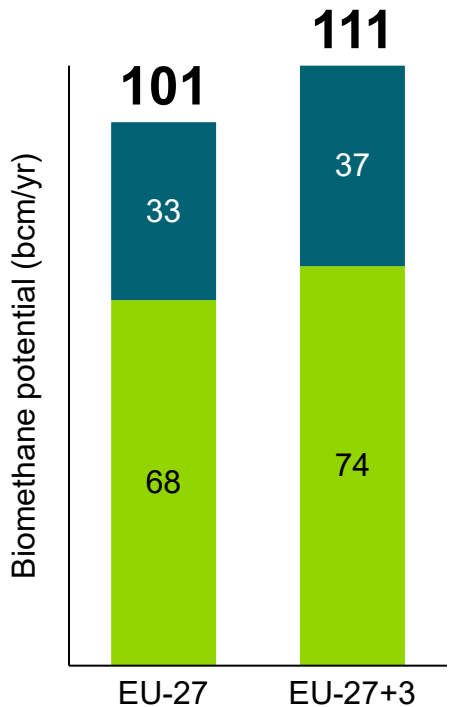
2040 Biomethane production could supply **85%** of gaseous fuels demand



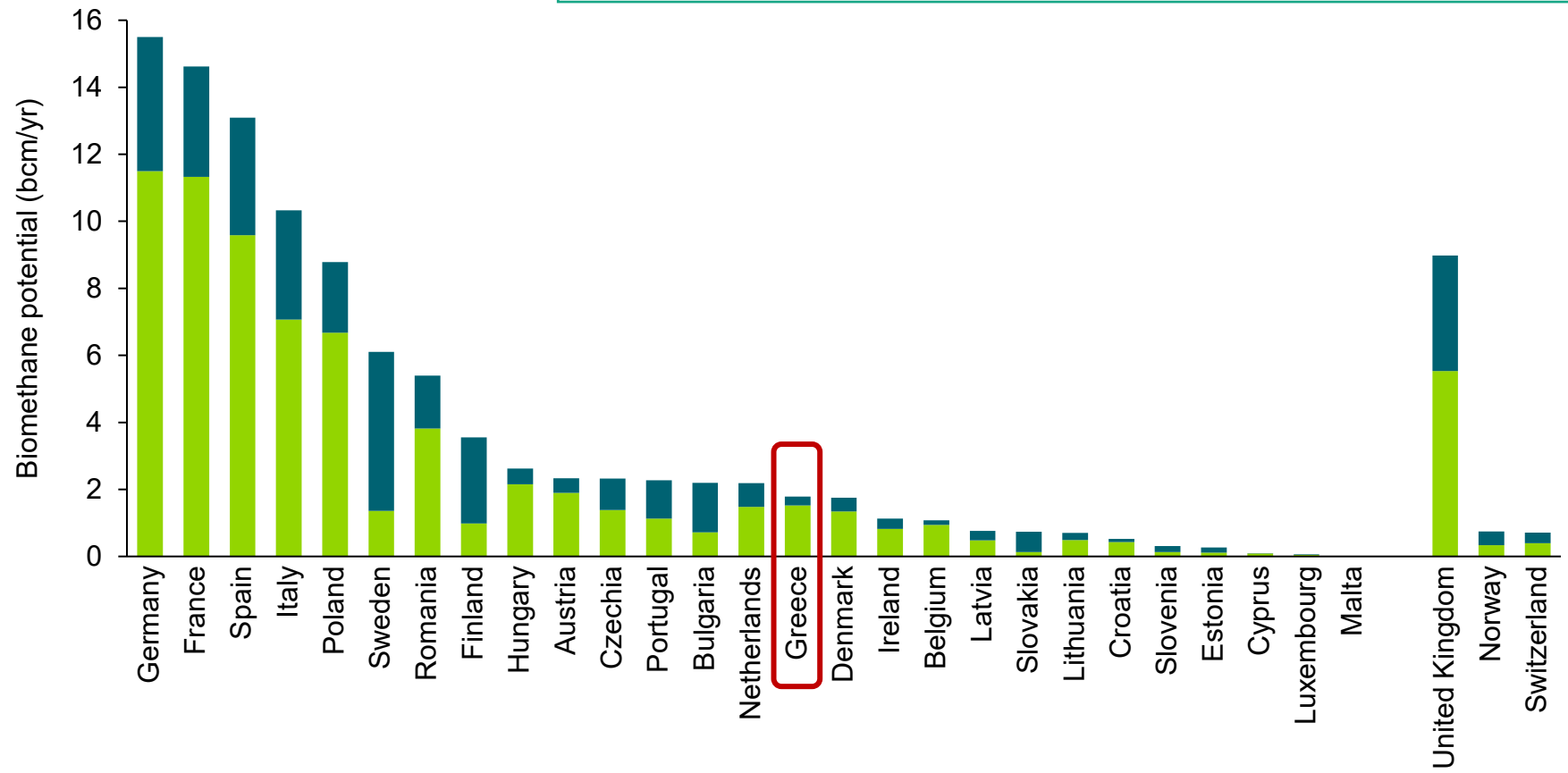
Balancing the **ENERGY TRILEMMA** while responding to great societal challenges: waste management, farming emissions abatement, affordability.

Biomethane potential of 111 bcm/yr in Europe in 2040 – dominated by anaerobic digestion

Estimates may deviate from nationally specific studies assessing feedstock availability for sustainable biomethane production



■ Anaerobic digestion
■ Thermal gasification



Biomethane production potential can be further increased by deploying novel feedstocks and technologies

Feedstocks

Digestate from anaerobic digestion



Digestate can be used to produce additional biomethane using either Hydrothermal gasification or Pyrolysis, in specific cases

Marginal and contaminated land



Significant potential for underutilised lands to produce bioenergy crops, without contributing to increase in land use change, or compromising existing food or feed production

Seaweed



Interest in using 'cast' seaweed as a sustainable feedstock for biomethane production, while also delivering multiple co-benefits

Technologies

Hydrothermal gasification



Versatile technology that can process a wide variety of (wet) biogenic and fossil wastes and effluents into biomethane, as well produce multiple co-products

Landfill gas



Existing landfill gas sites represent an important source of low cost biomethane production in the short to medium term

Renewable methane



Renewable methane production can facilitate energy system integration, and also help to increase overall biomethane production yields

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Renewable Energy Directive



BUILDINGS

49%

Indicative Target,
measures justified in NECPS

0.8 pp/y 2021–2025
1.1 pp/y 2026–2030

2030 OVERALL EU RES

42.5%

+ 2.5%



INDUSTRY

1.6 pp/y

Indicative Target + Subtarget RFNBOs /
H2 > 42%



TRANSPORT

29% or

14.5%

GHG intensity

Mandatory Target,
measures justified in
NECPS

CO2 Standards for HDVs

- ❌ CO2 Neutral Fuel definition
- ❌ CCF definition
- ✅ Methodology for the registration of heavy-duty vehicles running exclusively on CO2 neutral fuels
- ✅ Assessment of CCF role
- ✅ Revision 2027



TAILPIPE APPROACH

CO2 emission reduction targets

- 45% from 2030
- 65% from 2035
- 90% from 2040

ZEV targets for urban buses

- 90% from 2030
- 100% from 2035

The Gas Package creates an EU-wide right to injection

Obligation for network operators to address connection requests

4 principles

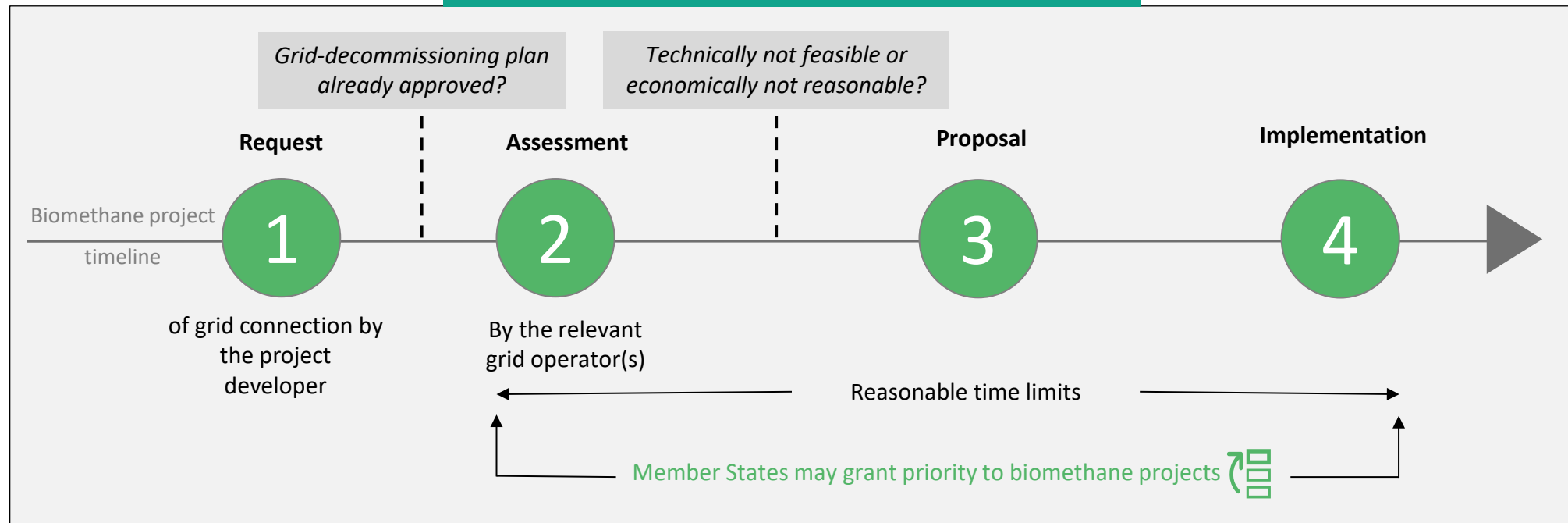


Time limits for grid operators to deliver

Principles of transparency, proportionality and non-discrimination

Criteria to assess connection requests (approved by National Regulatory Authorities)

Common steps in the Gas Directive



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BIOGAS
CONFERENCE**
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