



# Biogas and biomethane in Europe

## Report 2023

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# EBA – WHOLE BIOGASES VALUE

296

MEMBERS

243

COMPANIES

48

NATIONAL  
ASSOCIATION

35

COUNTRIES





1. Biogases production volumes in 2022
2. Achieving the 35 bcm target: growth rate and biomethane targets









# 1. Biogases production volumes in 2022



# Scope and methodology of EBA's data

	<b>GEOGRAPHICAL SCOPE</b>	EU-27 + Iceland, Norway, Serbia, Switzerland, Ukraine and UK
	<b>DATA INPUTS</b>	National biogas associations National statistical reports Industries present in the respective countries Biomethane map EBA white papers & briefings European research projects
	<b>NOTES ON GRAPHS &amp; STATISTICS</b>	Graphs include figures until end 2022 Bio-CNG and Bio-LNG are counted towards biomethane statistics
	<b>DEFINITIONS</b>	Bcm = natural gas equivalents. Biogas = raw, non-upgraded gas originating from anaerobic digestion Biogases = combined biogas and biomethane

# Billions spent on EU energy crisis in 2022

Protection of EU consumers  
(2021-2022)

€ 195  
billion

> 230 temporary  
national measures

Fossil fuel subsidies

€ 123  
billion

+ 120% relative to 2021  
as crisis response

Gas imports

€ 316  
billion

+ 148 % relative to 2021  
1/2 of total energy imports bill

Renewables subsidies

€ 87  
billion

+ 1% relative to 2021

# 97% of EU natural gas consumption was

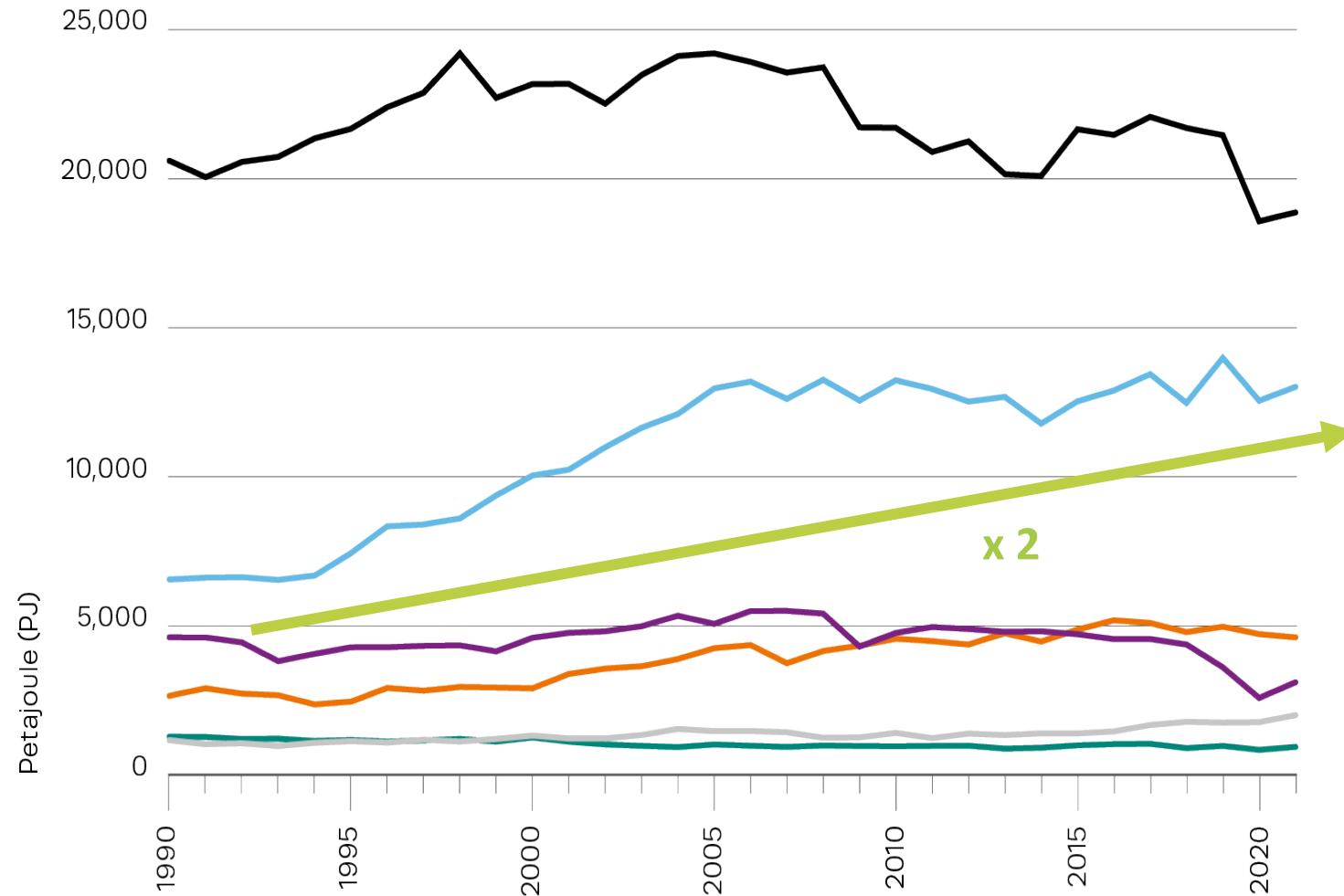


**342 bcm**  
**83% in 2021**  
**> 90% in 20**  
**MS**

- Solid fossil fuels
- Natural gas
- Crude oil
- Naphtha
- Gas oil and diesel oil
- Fuel oil

Source:  
Eurostat (online data code: nrg\_bal\_o)

## Imports of selected energy products in EU



# Renewables are EU's biggest energy



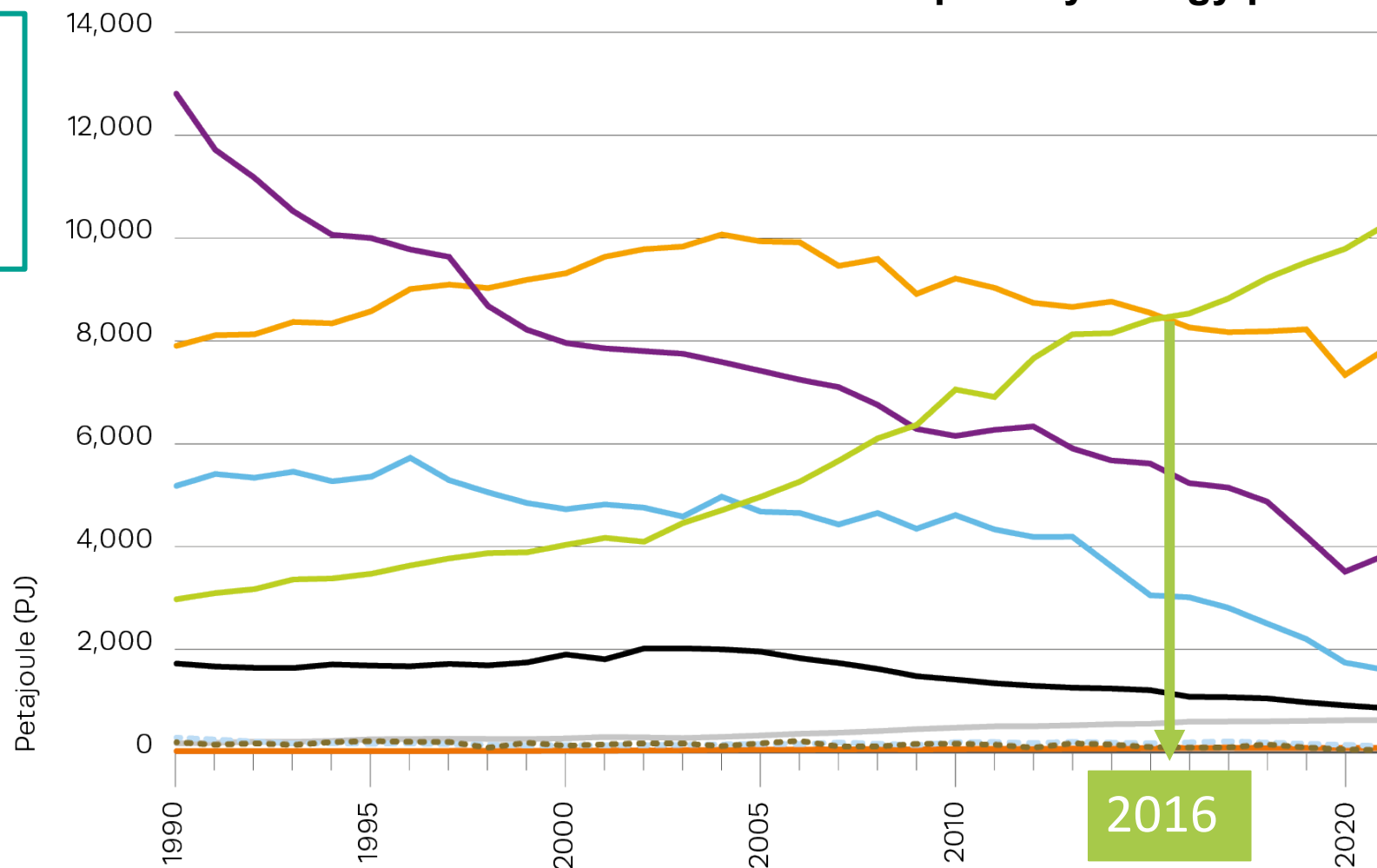
41% of energy from renewables in 2021

Long-term downward trend for most fuels

- Solid fossil fuels
- Peat and peat products
- Oil shale and oil sands
- Natural gas
- Oil and petroleum products (excluding biofuel portion)
- Renewables and biofuels
- Non-renewable waste
- Nuclear heat
- Heat

Source: Eurostat (online data code: nrg\_bal\_c)


## EU primary energy production





# Europe produced 21 bcm of biogases in 2022

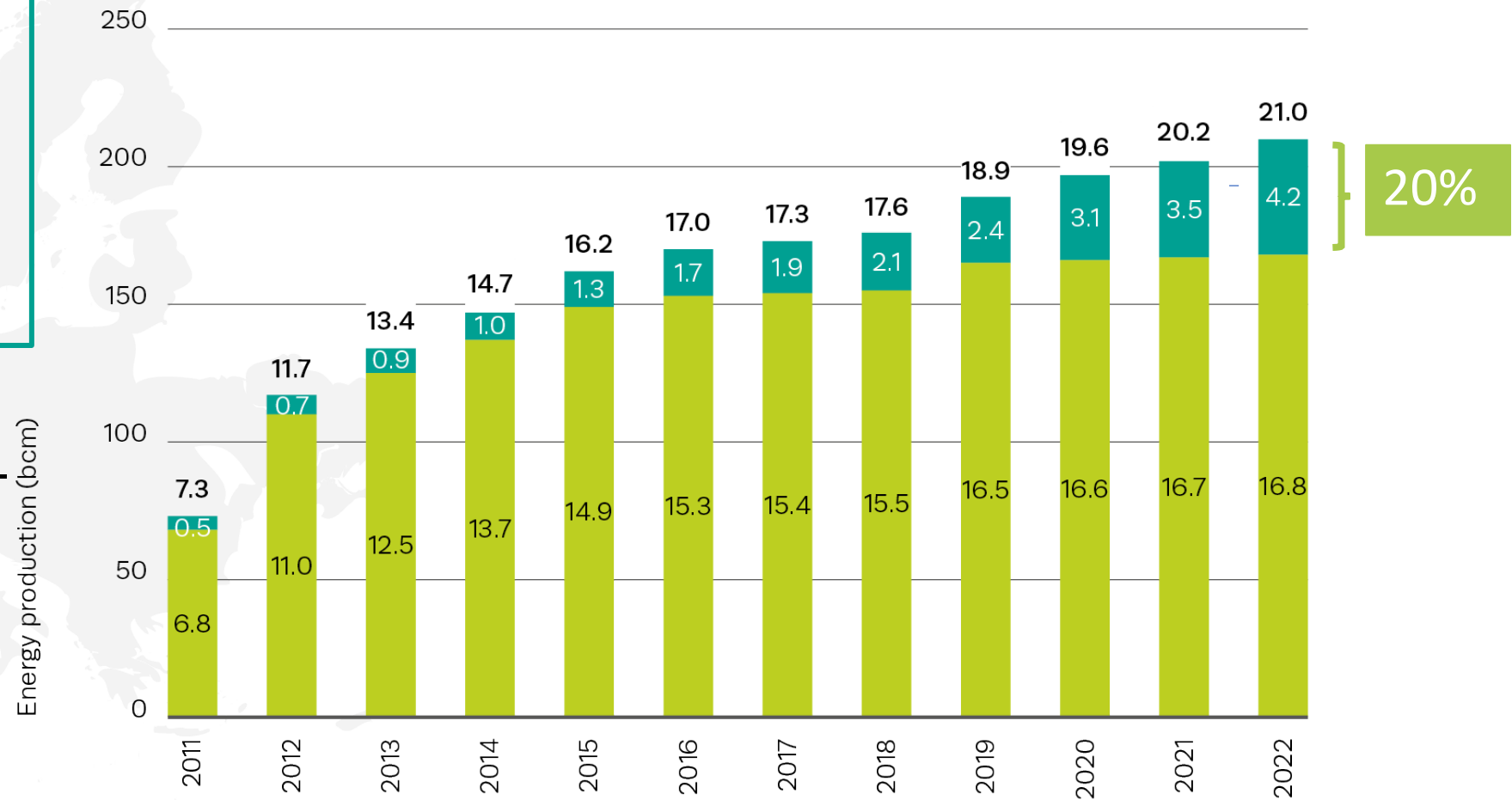
## Combined biomethane and biogas production in Europe

 **> gas demand of Poland**  
= 6% EU gas consumption



**20% biogases upgraded**

18 bcm produced in EU-27



# 18% more biomethane in Europe in 2022

## European biomethane production in EU-27 and Europe



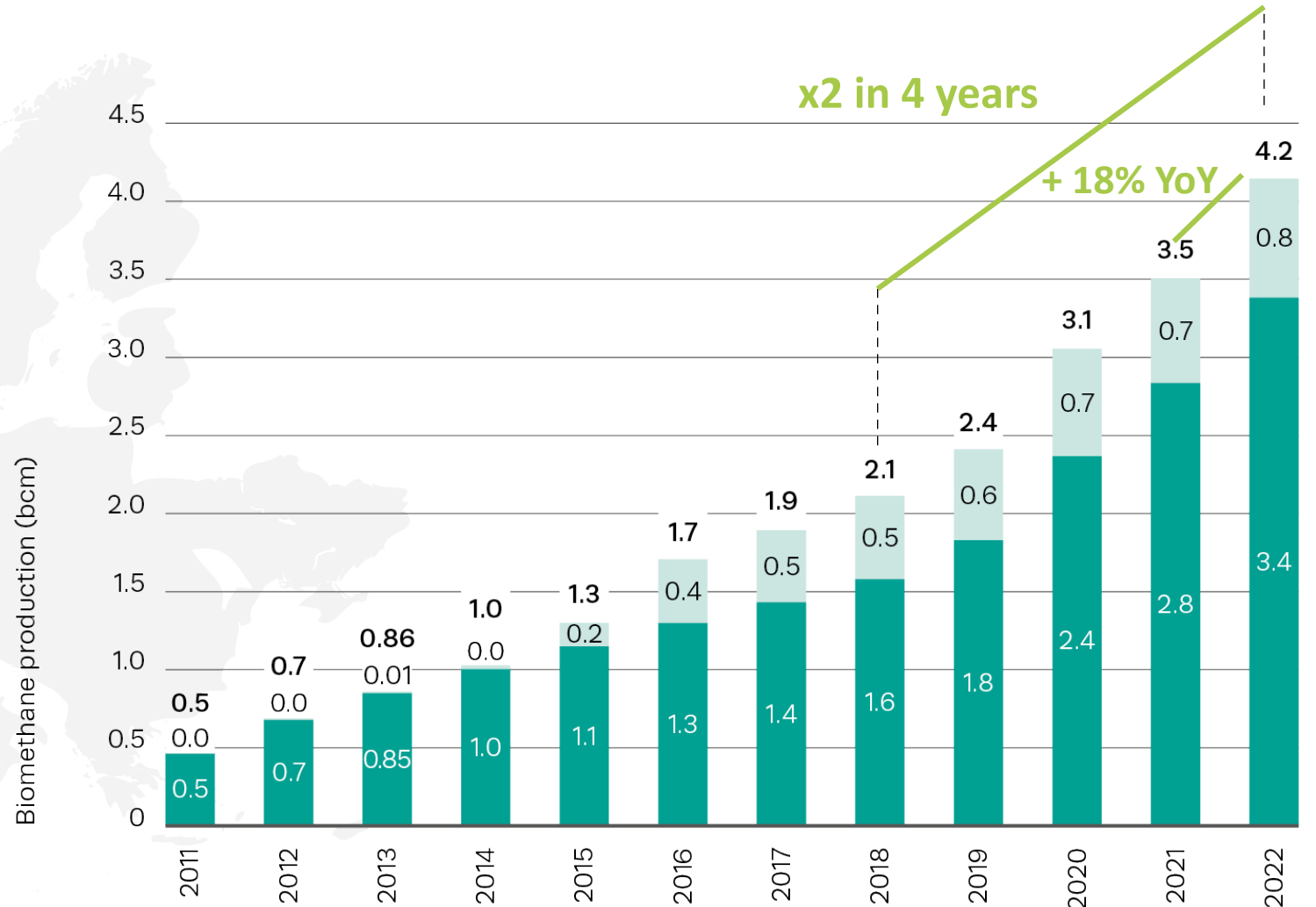
**4.2 bcm** (3.4 in EU-27)

4.5 bcm installed capacity



x2 production since 2018

France, Italy, Denmark, UK fastest growing countries



■ EU-27  
■ Europe

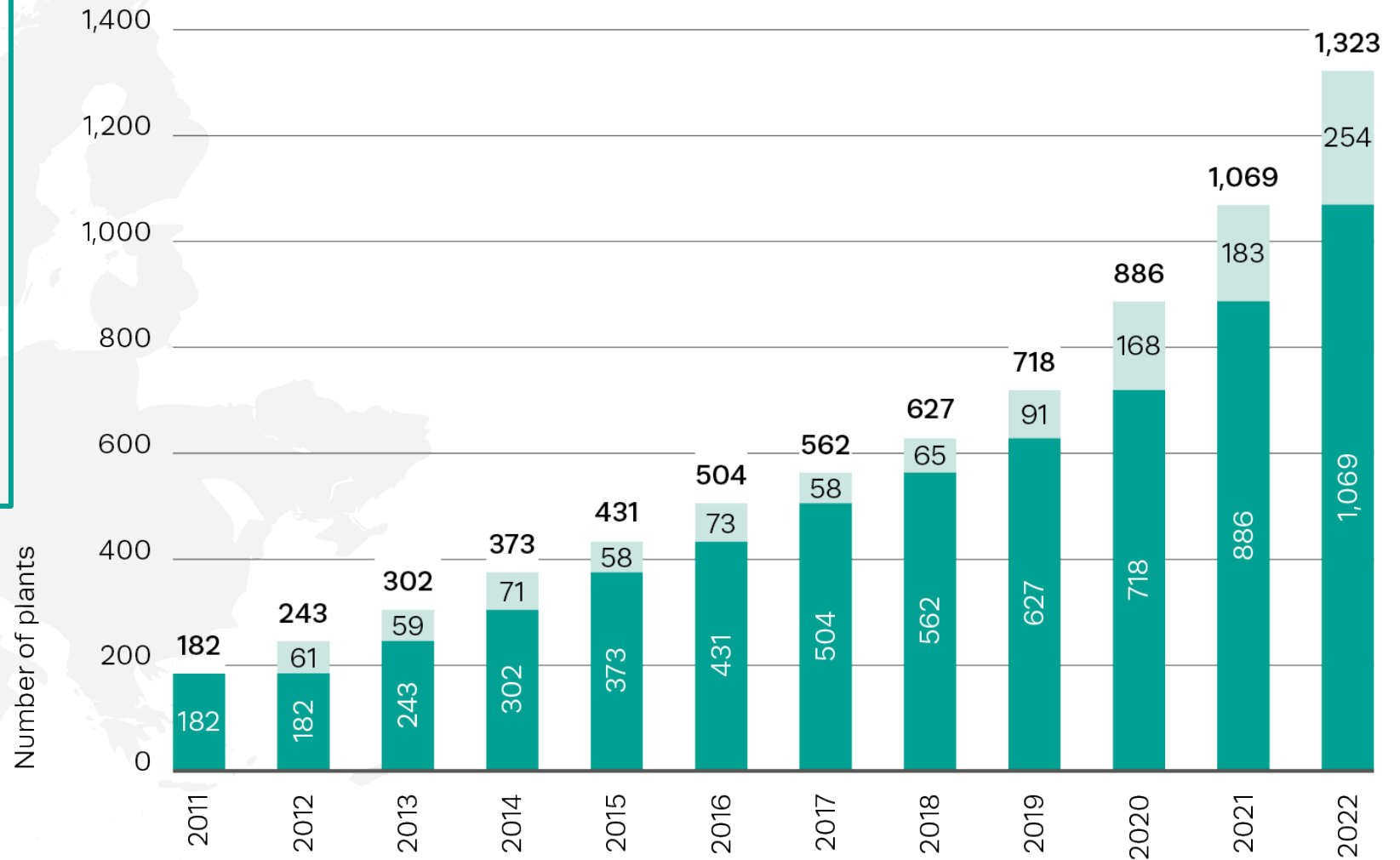
# Record number of new biomethane plants in

> 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

## 2. Achieving the 35 bcm target: growth rate and biomethane targets



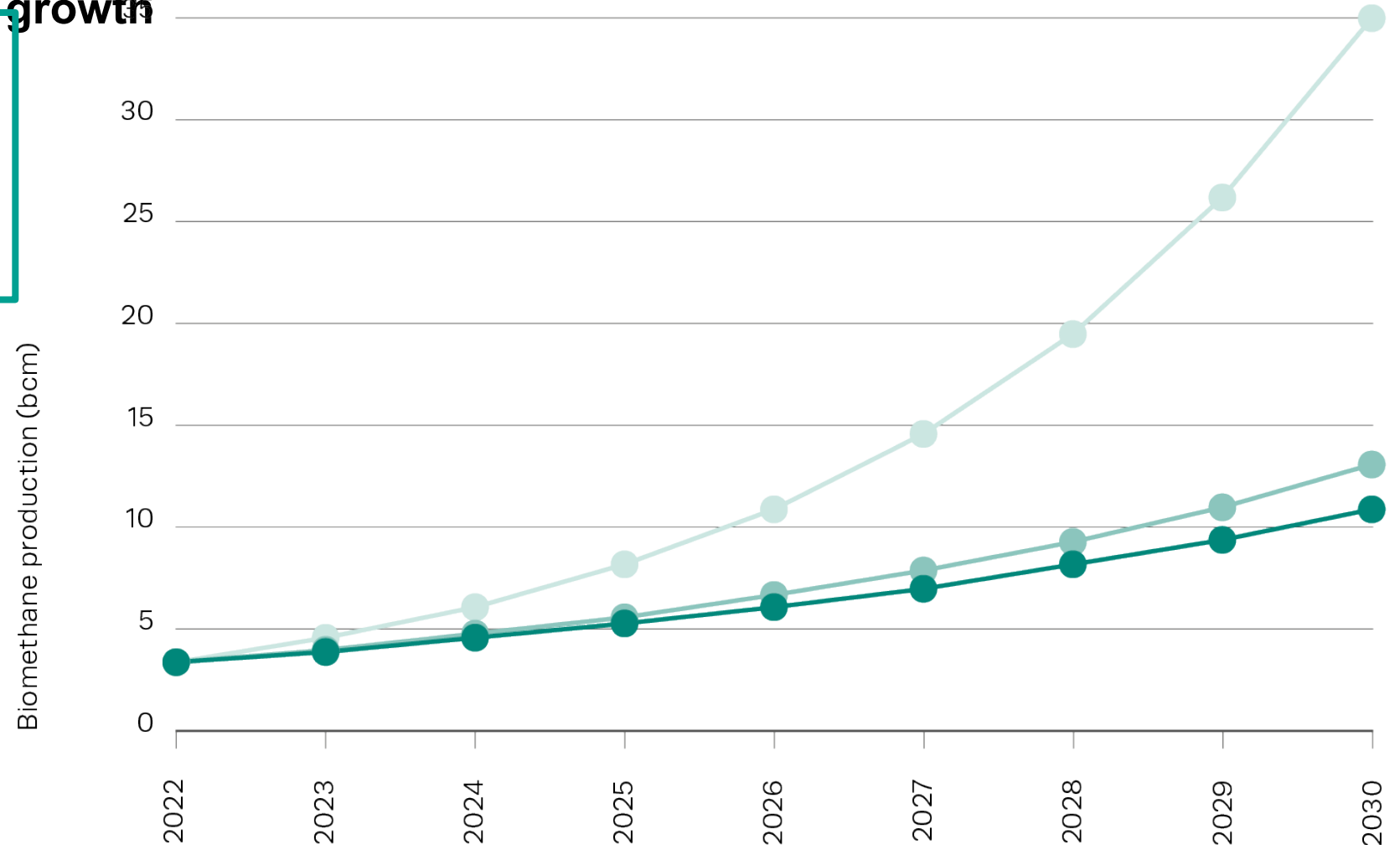
# 30% annual growth required to reach 35

Achievable, but needs optimal market conditions

Current growth rate > 5-year average

## Achieving the 35 bcm target: current growth rate version required growth

- Biomethane production at 5-year-average growth rate (15.7%)
- Biomethane production at 2022 growth rate (18.3%)
- Biomethane production at required growth rate (33.8%)



# Biomethane targets per Member State

## Governance of the Energy Union

Legal requirement to develop **National Energy and Climate Plans (NECPs)**

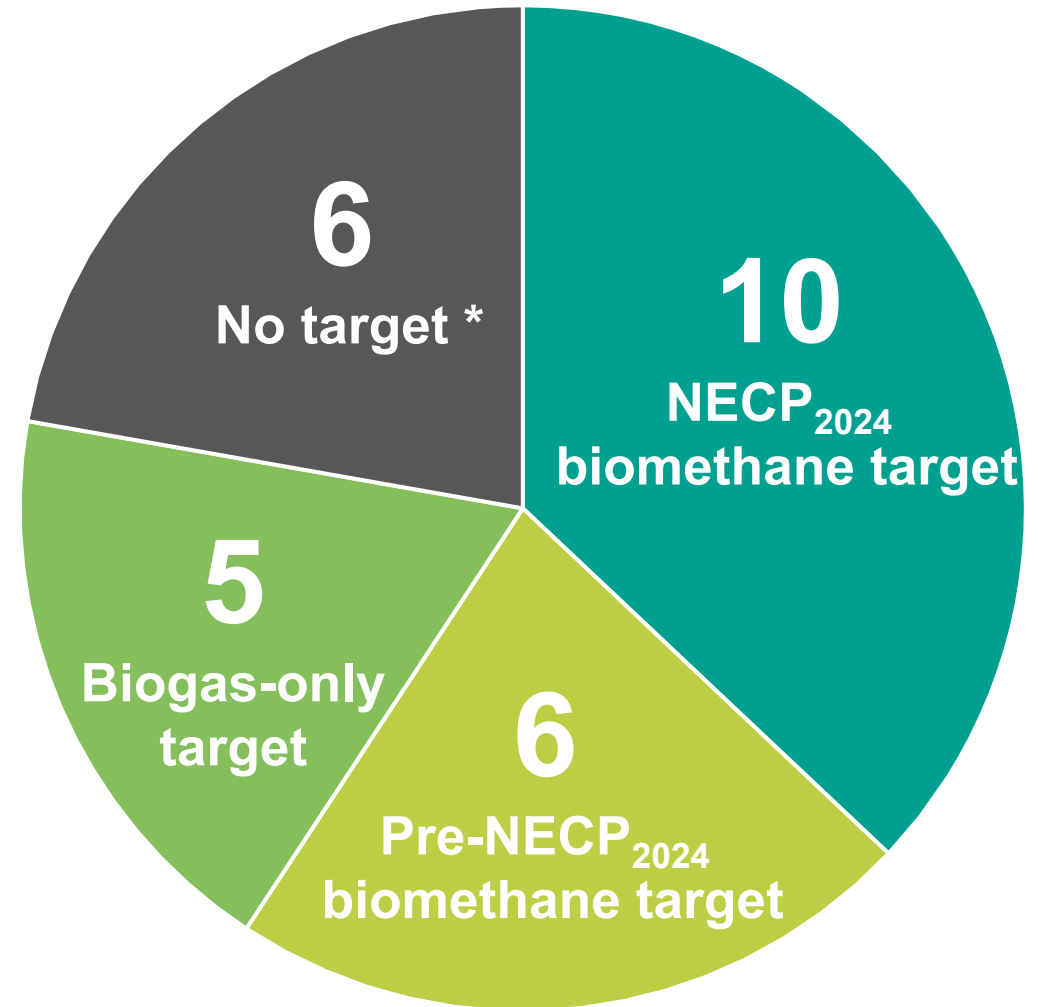
to outline climate and energy goals

Expectations December 2022:

Guidance EC encourages including component on biogases and biomethane in NECP updates

June 2023: Deadline for NECPs update

November 2023: 22 NECPs submitted



\* Belgium, Bulgaria, Germany, Hungary, Portugal, Romania

# 22 draft updated NECPs are published

## NECPs with 2030 biomethane target

Czechia	<b>0.5 bcm</b>
Denmark	<b>1.8 bcm</b> 100% green gas in grid
Estonia	<b>0.04 bcm</b> (380 GWh)
France	<b>4.15 bcm</b> (44 TWh)
Greece	<b>0.2 bcm</b> (2.1 TWh)
Italy	<b>5.7 bcm</b>
Lithuania	<b>0.13 bcm</b> (1.4 TWh)
Netherlands	<b>2 bcm</b>
Slovakia	<b>0.3 bcm</b>
Slovenia	<b>0.05 bcm</b> (480 GWh)

**TOTAL 15 bcm**

## pre-NECP 2030 biomethane target (but no NECP target)

Austria	<b>0.39 bcm</b> (50% renewable gas target)
Finland	<b>0.38 bcm</b> (4 TWh)
Ireland	<b>0.58 bcm</b> (5.7 TWh)
Latvia	<b>0.09 bcm</b> (10% fossil natural gas)
Poland	<b>0.99 bcm</b> (50% renewable gas target)
Sweden	<b>0.94 bcm</b> (10 TWh)

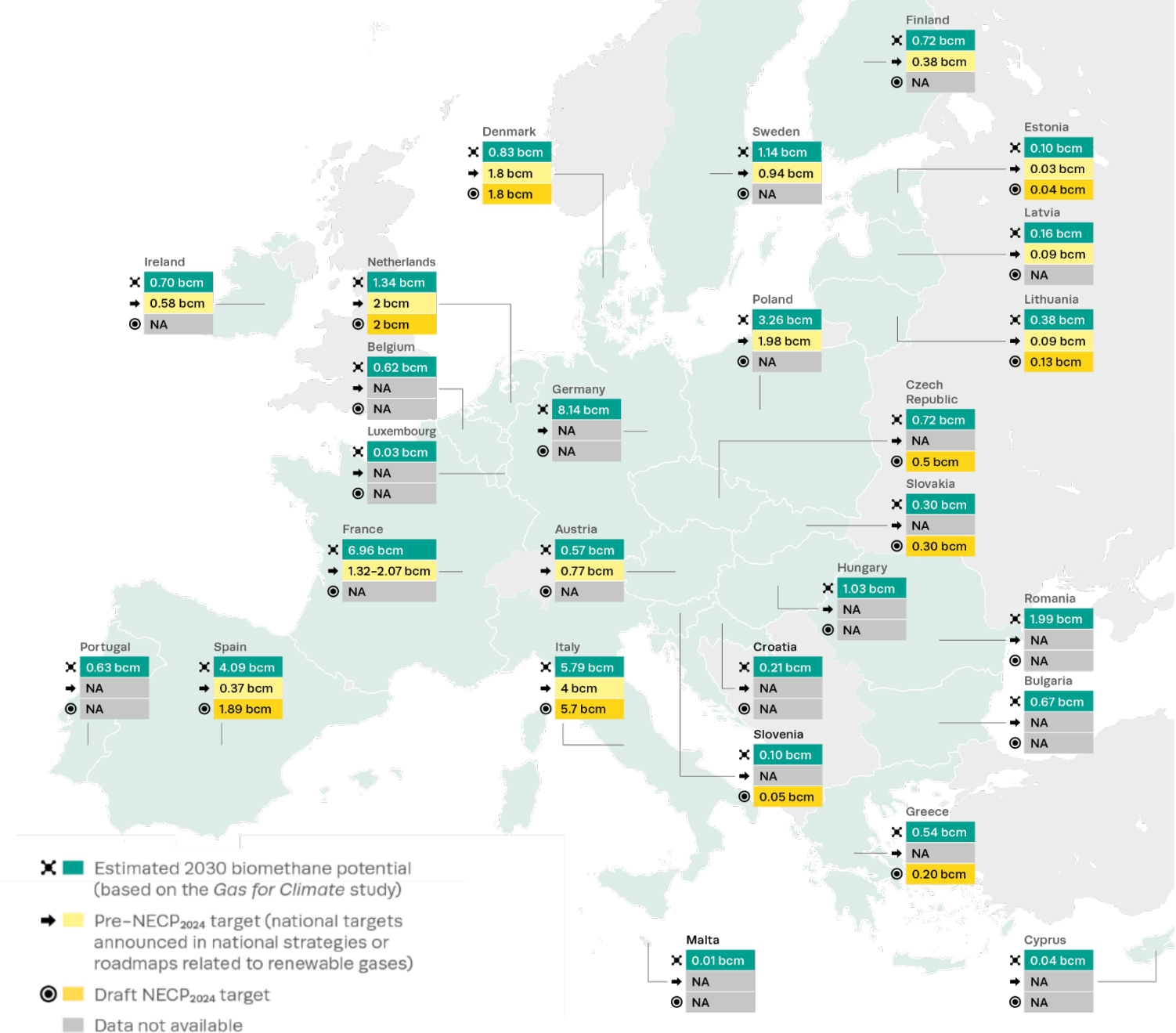
**TOTAL 3.4 bcm**

# Anticipated 2030 biomethane production

## Methodology

1. Draft updated NECP<sub>2024</sub> target
2. Pre-NECP<sub>2024</sub> target
3. Current production

20.2 bcm





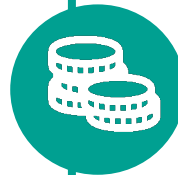
# € 18 billion investments for biomethane

## 1<sup>st</sup> EBA Investment Outlook for biomethane

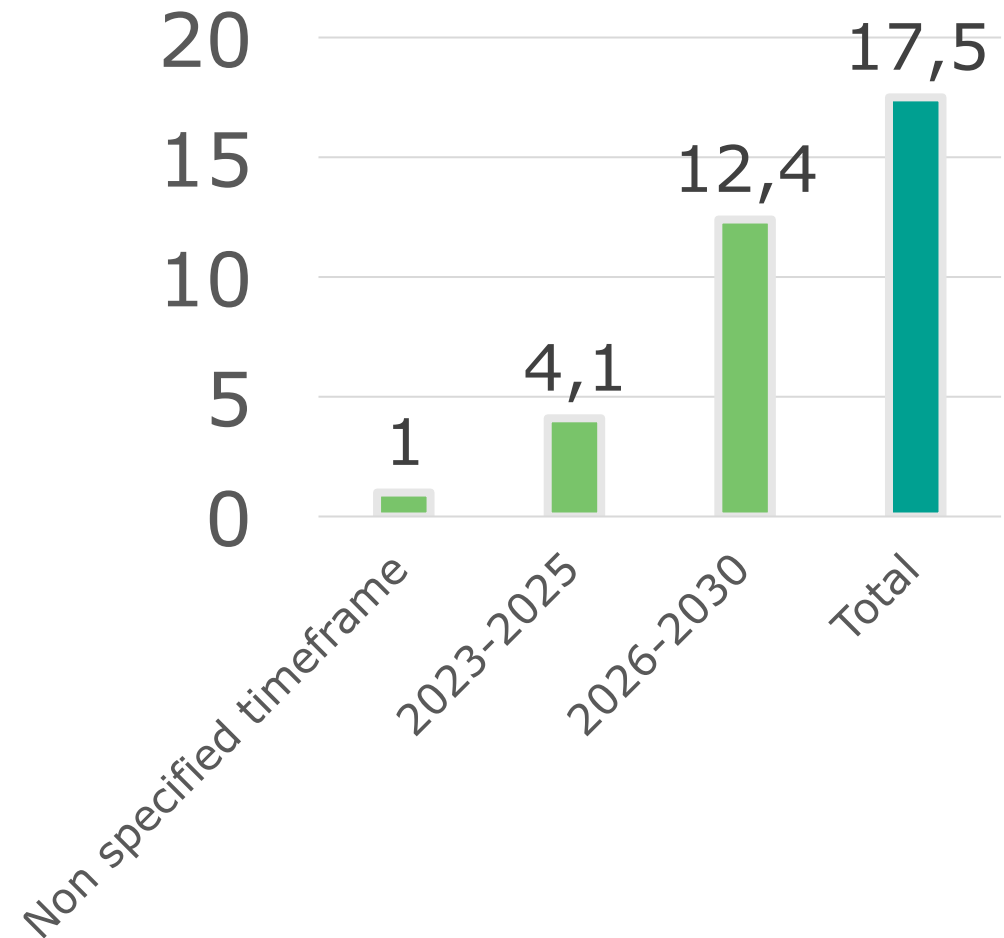
Based on voluntary survey of investors



Almost 18 billion planned by end of 2030



Faster pace on 2<sup>nd</sup> half of this decade





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