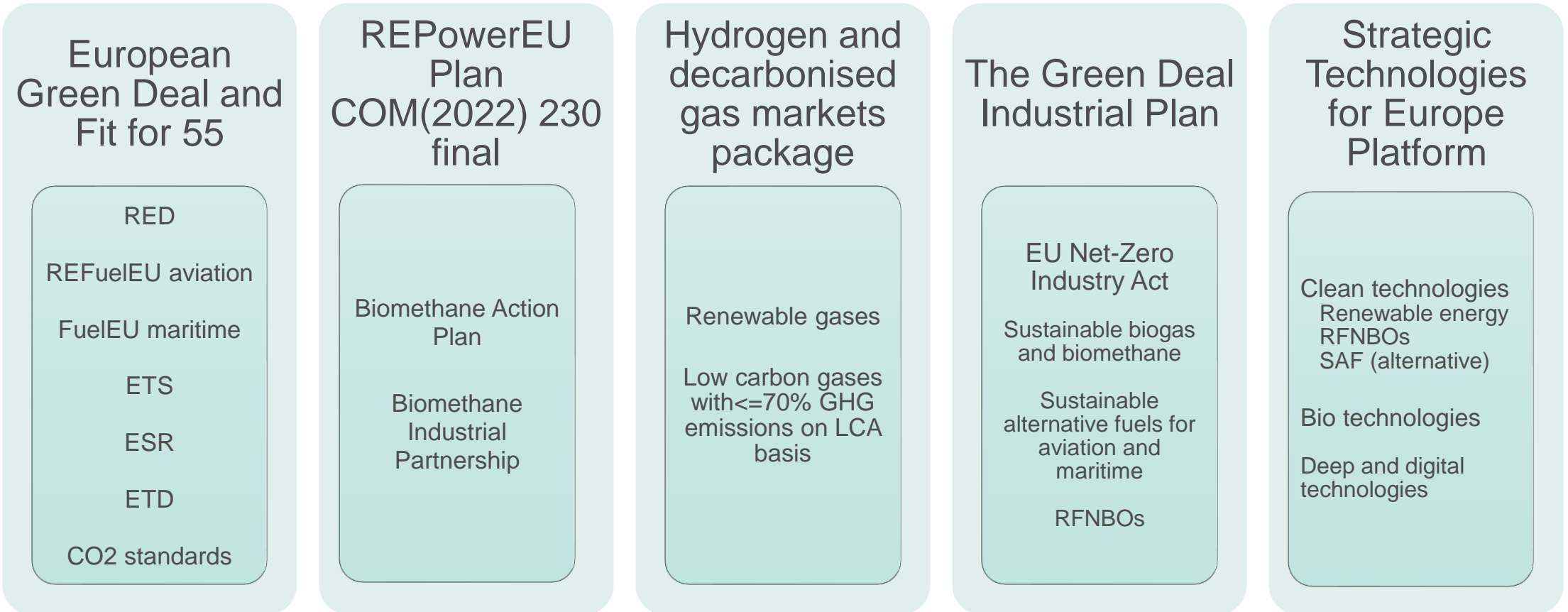




The EU policy and perspective for renewable gases

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European Commission
DG Research and Innovation

EU policies



Targets

RED

In transport: advanced biofuels and biogas and RFNBOs **5,5 %** in 2030, of which RFNBOs at **least 1 %**

In industry: RFNBOs used for final energy and non-energy purposes **42%** (2030) and **60%** (2035) of used hydrogen

REFuelEU aviation

SAF at least **6%** (2030) and **70%** (2050) of which synthetic aviation fuels average share **1.2%** (2030) and **35%** (2050)

FuelEU maritime

Biofuels, biogas, RFNBOs and RCF to reduce the GHG content of the energy in ships by **2%** (2025), **-6%** (2030), **-80%** (2050) from 2020

2 % RFNBOS as of 2034 if share of RFNBO in the maritime bunker fuels used by ships is less than 1 % by 2031

ESR

EU-wide reduction of **40%** by 2030 in the transport, buildings, agriculture and waste sectors compared to 2005

ETS

reduce GHG emissions by **62%**, from 2005

Carbon pricing for maritime and, aviation from 2026, buildings and road transport (and certain industries) from 2027

REPowerEU

35 bcm biomethane domestic production annually by 2030

10 million tons domestic renewable hydrogen by 2030

NZIA

EU manufacturing capacity of strategic net-zero technologies meets at least 40% of EU annual deployment needs by 2030

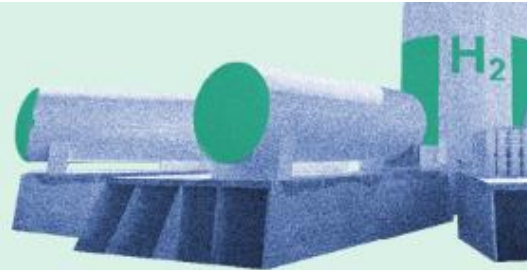


Hydrogen and decarbonised gas markets package

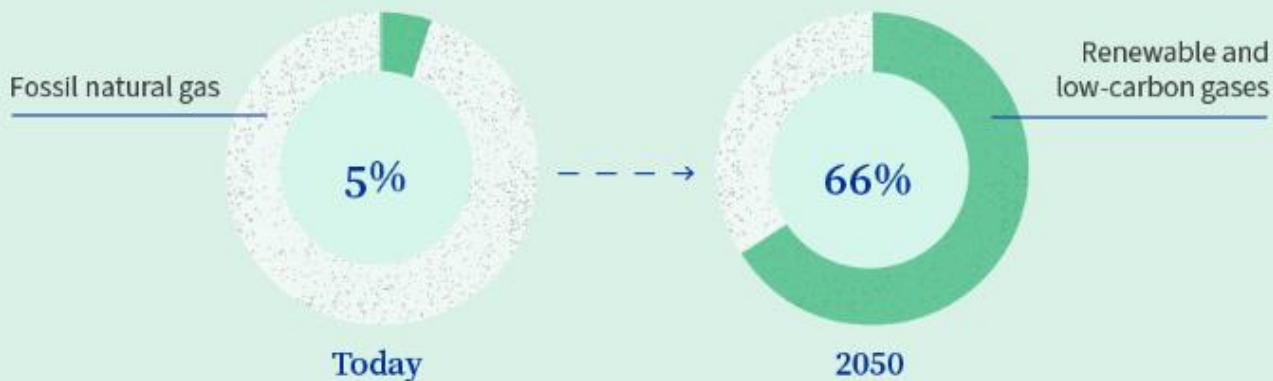
COM(2021) 804 final – Adopted

The hydrogen and decarbonised gas market package proposes revised and new rules to lower the carbon footprint of the gas market. The goal is to **shift from fossil natural gas to renewable and low-carbon gases and boost their uptake** in the EU by 2030 and beyond.

The package also aims to help **strengthen the security of gas supply** and **reduce dependency** on imported fossil fuels.



Shift to renewable and low-carbon gases



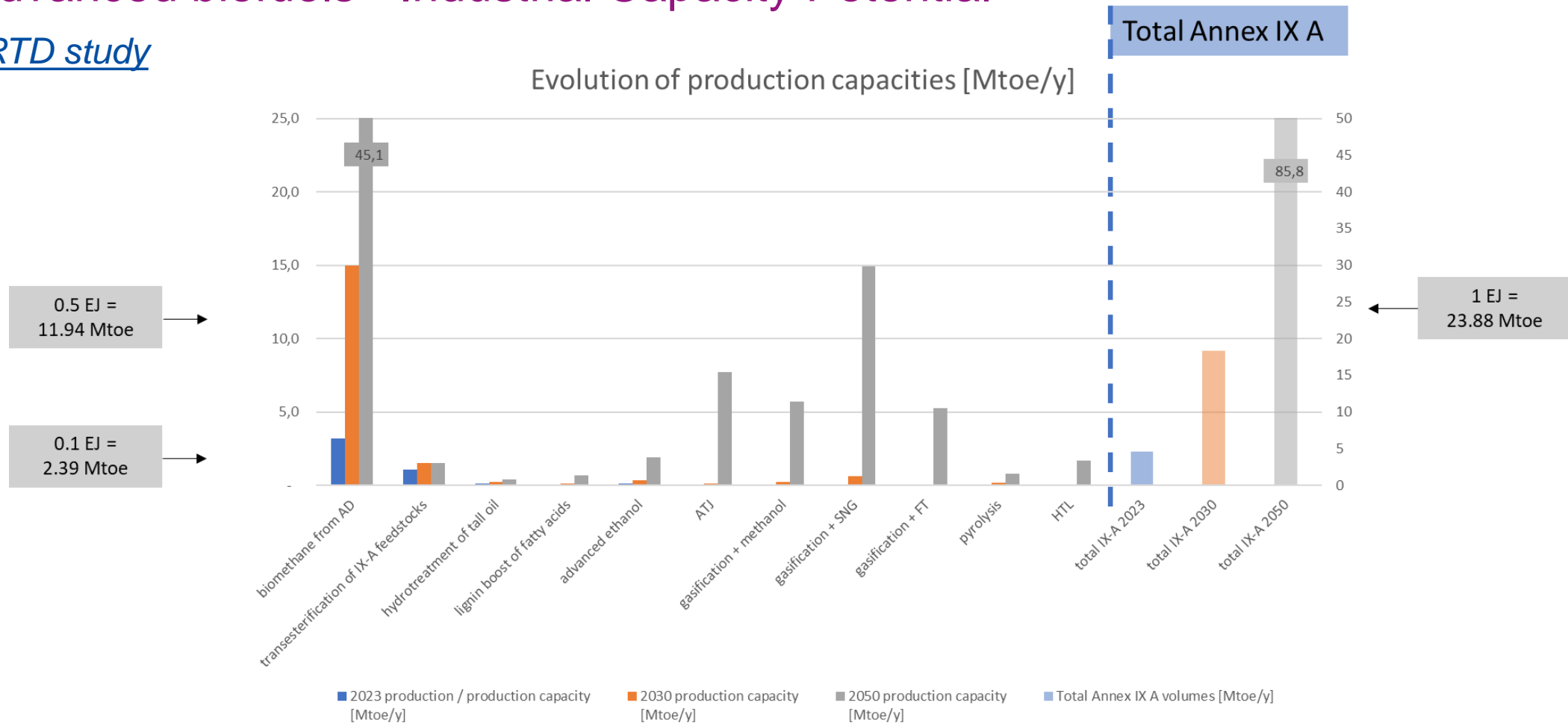
- **High tariff discounts** to push existing natural gas infrastructure to integrate a higher share of hydrogen and renewable gases,
- Provisions to facilitate **blending hydrogen** with natural gas and renewable gases, and greater EU cooperation on gas quality and storage
- National network development plans should be based on **joint scenarios** for electricity, gas and hydrogen
- Renewable gases are:
 - **Biogenic**: Organic sources, biogas, biomethane
 - **RFNBOs** (e-gases), renewable H₂, synthetic CH₄
- **Low-carbon** gases produce at least 70% GHG less than NG on LCA basis

Role of renewable gases in the EU energy system

- Seasonal **storage** of renewable energy
- Alternative to some **hard-to-abate industries**
- **Enabler**: non-immediately economically viable applications can become viable e.g. via renewable fuel (e.g., **hydrogen**) **valleys**
- Conditions: 1) increased efficiency, 2) decreased costs, 3) supportive regulatory environment
- **Detailed rules to produce** renewable liquid & gaseous transport fuels of non-biological origin (**RFNBOs**) set in two RED Delegated Acts (additionality, certification, GHG methodology)

Development of outlook for the necessary means to build industrial capacity for drop-in advanced biofuels - Industrial Capacity Potential

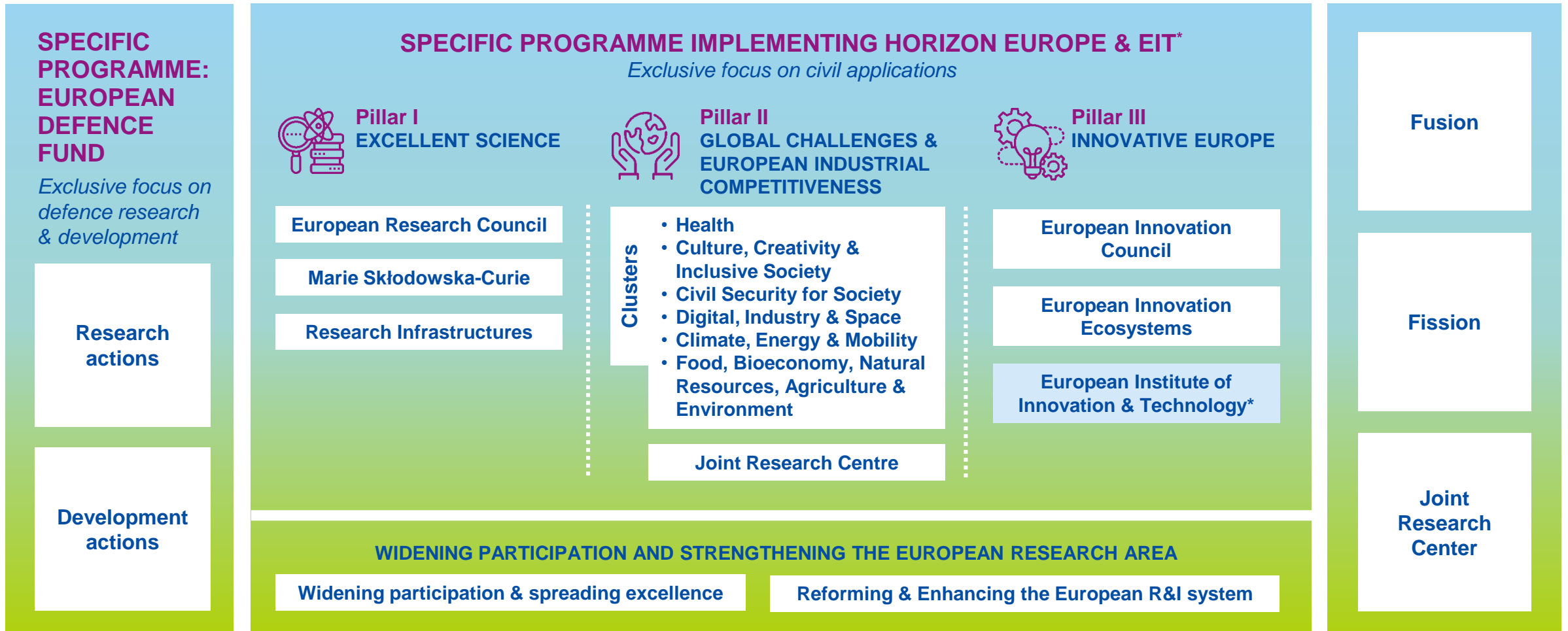
EC RTD study



- Current production of advanced biofuels and biogas 4.6 Mtoe/y (**biomethane 3.2 Mtoe/y**)
- Capacity expansion for advanced biofuels and biomethane **18.4 Mtoe/y in 2030: Biomethane from AD 15.0 Mtoe/y**
- From a technical point, capacity expansion, capped by feedstock availability, could be almost **3 times larger** and reach **57.7 Mtoe/y in 2030**

HORIZON EUROPE

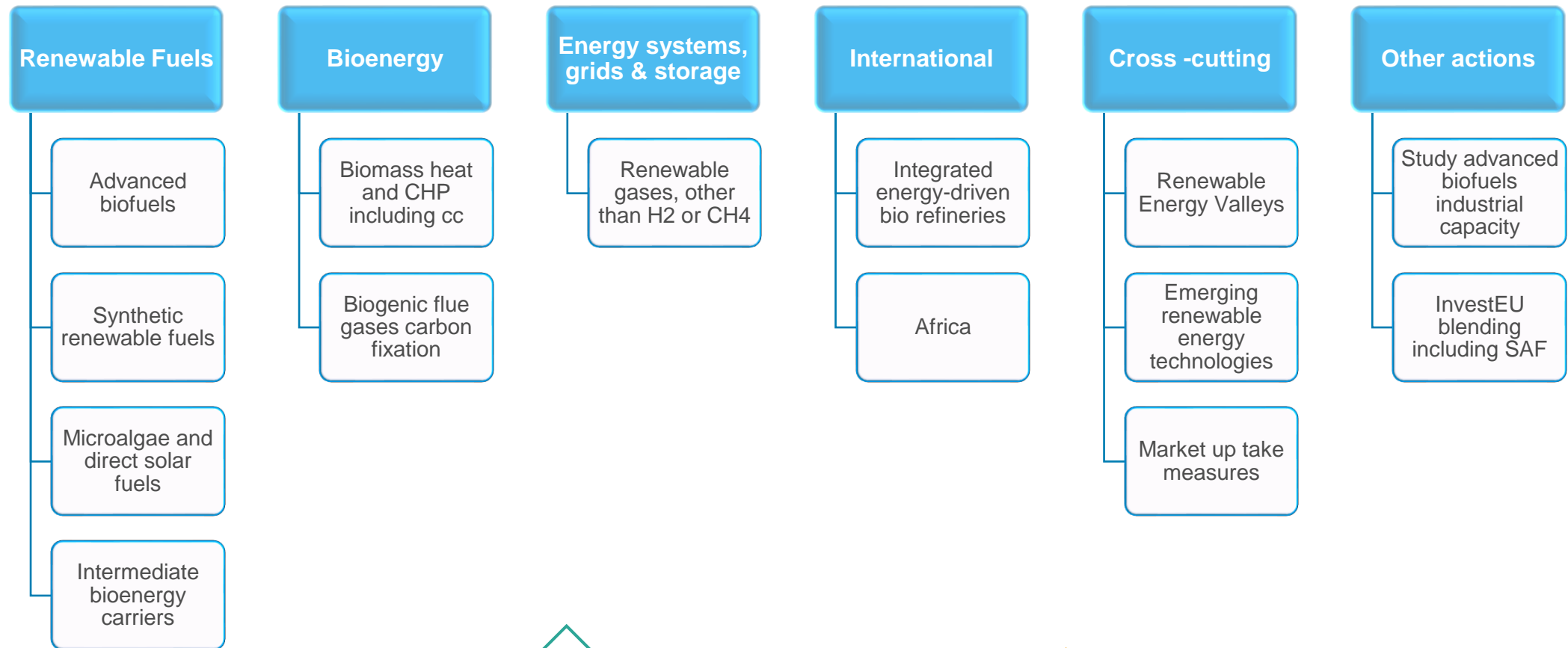
EURATOM



* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

Horizon Europe Work Programme 2023-2024

Cluster 5 Climate Energy and Mobility, Destination Sustainable, secure and competitive energy supply, Renewable Energy



The European Green Deal

REPowerEU:

Clean Energy Transition Partnership (CET P)

- 30+ Countries: EU MS + ACs + International Partners, 50+ Funding Partners Funding Agencies & Ministries, 13 Coordination Units, Coordinators: Austrian Ministry of Climate Action Swedish Energy Agency
- Annual Joint Calls for RTDI Projects 100 – 130 Mio €/a 2021 – 2027
 - International Part 2 - stage call
 - National/Regional Part evaluated to national/regional eligibility

- [The joint Call 2023](#) - 12 Call modules of which:

5. Hydrogen and renewable fuels

Objectives	To accelerate the development of technologies for hydrogen and renewable fuels to facilitate their use in "hard-to-abate" carbon sectors and to serve flexibility and sector coupling needs in the energy system.
Topics	Technological development, demonstration, and deployment of renewable and synthetic fuels production, including hydrogen and energy storage
Activities	Targeting technological solutions for end users
Stakeholders	Research organisations, Universities, Companies, Public organisations, NGOs
TRLs	Final TRL = 5–9

- Stage 2 Closing: 27 March 2024, 14:00 CET - Projects start September 2024 (Tentative)
- [Application to National/Regional Funding Agencies](#)

- **Joint Call 2024:** Opening in June

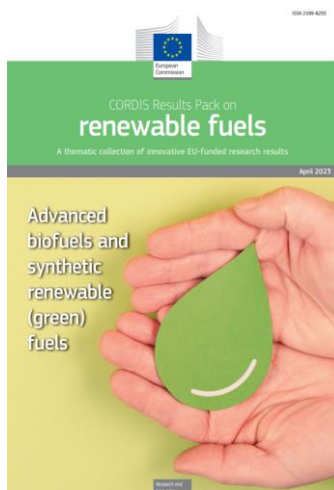
- Call Launch is planned for 12 Sep 2024 - **Stay tuned!**
- Pre-announcement Event on 4 June 2024
- Registration and Agenda of the events coming soon

- Matchmaking Platform: [Clean Energy Transition Partnership | Registration \(b2match.io\)](#)

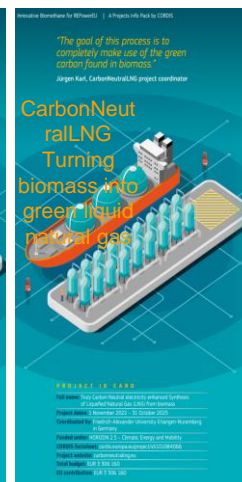
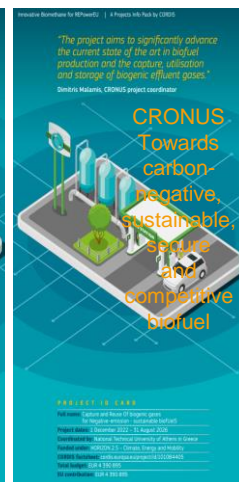
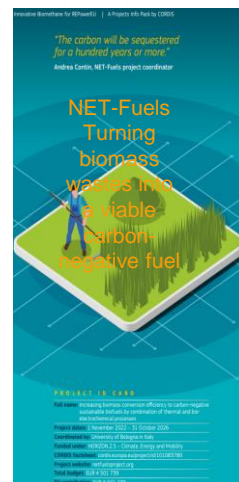
New or improved upgrading technologies for **biomethane** production



New or improved cost-efficient **methanation** technologies



[CORDIS results pack on renewable fuels](#)



[Innovative biomethane for REPowerEU](#)

Thank you!
#HorizonEU

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