Gas for Climate

Action Plan for secure, clean and affordable energy in Europe

March 31st 2022

Agenda

11.00 – 11.10	Welcome and introduction from Gas for Climate chair
11.10 – 11.20	EU energy balance and dependence on Russian energy imports
11.20 – 11.45	Action Plan for implementing the REPowerEU
11.45 – 12.00	Q&A

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Welcome from the Consortium

- Gas for Climate was initiated in 2017 to analyse and create awareness about the role of renewable and low carbon gas in the future energy system. Gas for Climate is committed to achieve net zero greenhouse gas emissions in the EU by 2050.
- New *Action Plan for secure, clean and affordable energy in Europe* presented today

Marie-Claire Aoun
Chair of Gas for Climate &
Director of Prospective and
Institutional Relations at Teréga

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Gas for Climate over the years

Time to act now

- Recent analyses by Gas for Climate and the continued work on the European Hydrogen Backbone have shown that an acceleration of **renewable gas uptake is feasible**
- **Existing** EU energy and climate **policies are not sufficient** to speed-up renewable gas uptake
- **FF55 and REPowerEU** are steps in the right direction but need to be substantiated with **prompt actions** to become reality

This action plan

- Targets the "**how to implement**" REPowerEU for renewable gases
- Specific actions targeting ***supply and market, funding and permitting, and, infrastructure***

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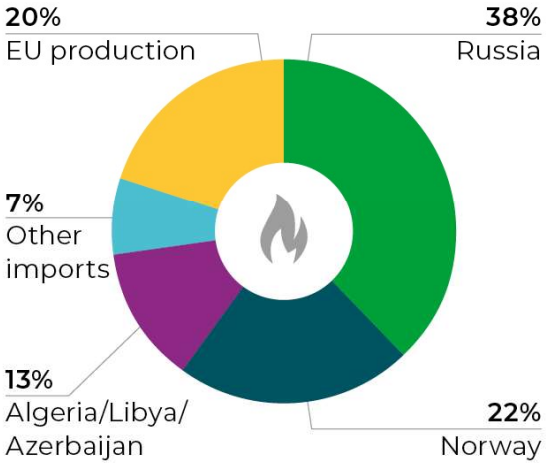
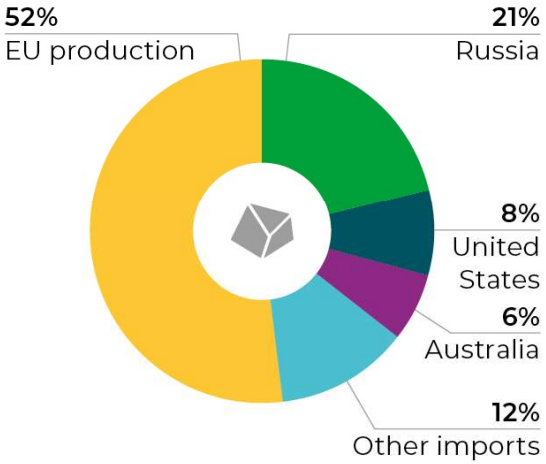
High dependency on Russian energy imports

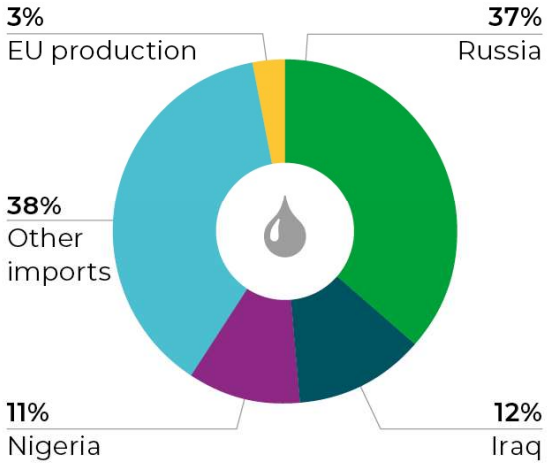
Gas import as % of total EU consumption



Coal import as % of total EU consumption



Oil import as % of total EU consumption



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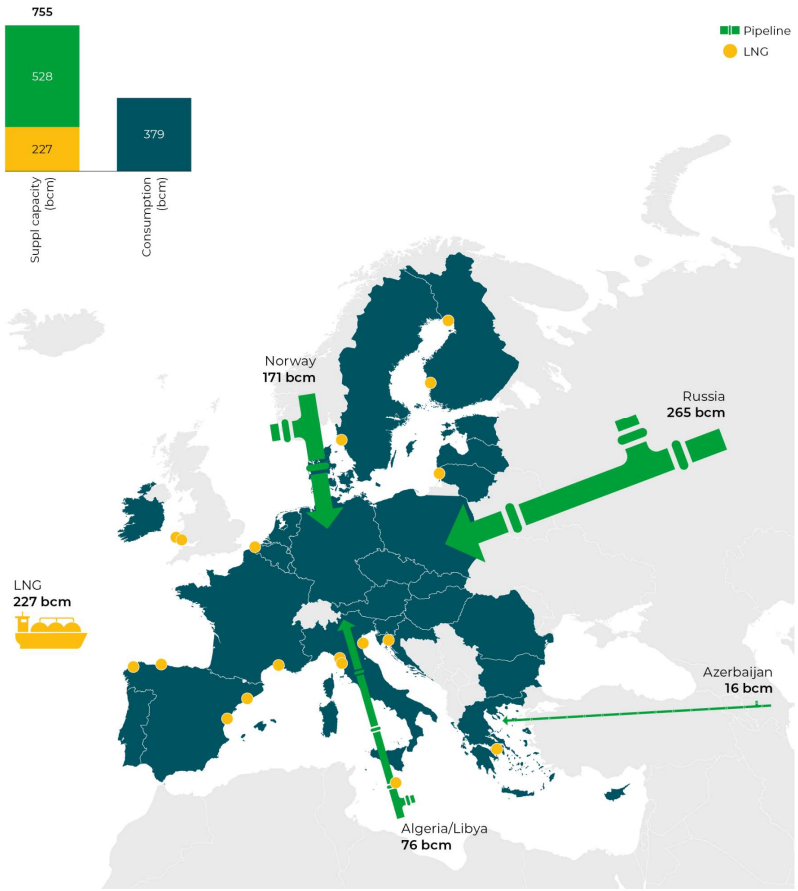
Diversification of gas supply is needed

Yearly gas supply capacity (in bcm) in Europe[12,13]



- **Russia has the highest pipeline capacity** supply Europe with 155 bcm of natural gas every year
- Increasing LNG imports is not a viable short-term solution as most terminals are located in Western Europe and pipeline transport capacity to Eastern Europe is a bottleneck.
- **Rapid scale-up of green hydrogen and biomethane** needed to replace Russian gas imports

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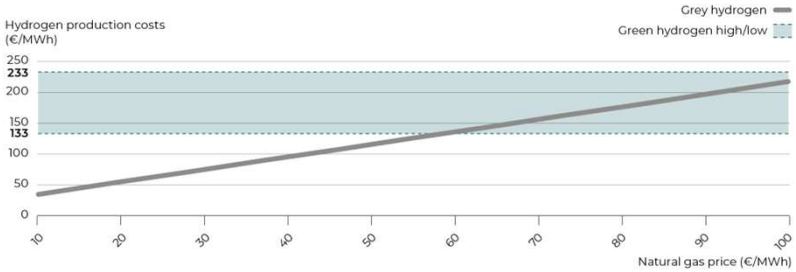
Rising prices for natural gas make renewable gases cost competitive

Figure 3:
Benchmark prices for natural gas in Europe (TTF)[17] and production costs for biomethane in 2022

Figure 4:
Grey and green hydrogen production costs with increasing natural gas price



- Gas prices have **increased sixfold from €20/MWh to around €120/MWh** between March 2021 and March 2022, threatening the competitiveness of Europe's industry and amplifying the risk of energy poverty.
- **Biomethane production costs are €50-€90/MWh** depending on feedstock and plant scale
- At a natural gas price of €100/MWh, the production costs of grey hydrogen are around €6/kg, while the productions costs for **green hydrogen are between €4/kg and €7/kg**

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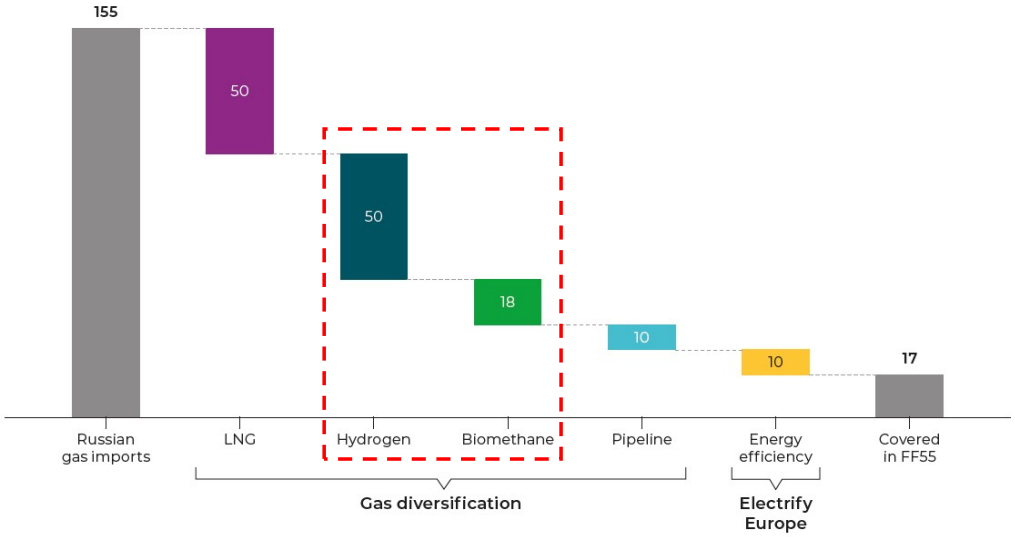
REPowerEU aims to make Europe independent from Russian fossil fuels well before 2030

Gas savings additional to Fit for 55 as stated in REPowerEU for 2030 (in bcm)[18]



- **Renewable gases play a key role in meeting the REPowerEU ambition**
- Today, the EU produces 3 bcm of biomethane and 17 bcm of biogas. REPowerEU sets a target of 35 bcm of biomethane production per year by 2030—an **increase of 18 bcm** compared to the volume envisaged in the Fit for 55
- The “hydrogen accelerator” aims to develop infrastructure, storage facilities, and ports, and replace demand for Russian gas with an additional 31.6 bcm (333 TWh) of imported green H2 and an additional 13.9 bcm (147 TWh) of domestic green H2, totalling almost **50 bcm of additional H2 in 2030**.

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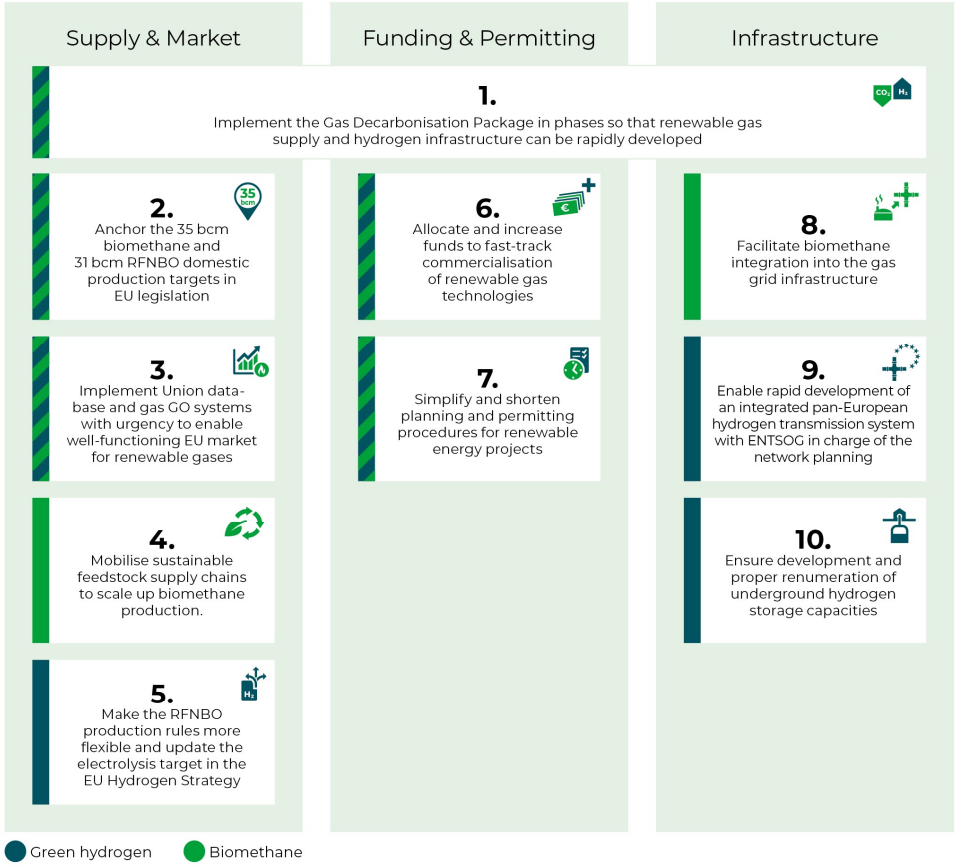
Action Plan for implementing REPowerEU: 10 concrete measures



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Supply and market | Funding & Permitting | Infrastructure

1.

Implement the Gas Decarbonisation Package in phases so that renewable gas supply and hydrogen infrastructure can be rapidly developed

By end of 2022

- We are **not on the trajectory to meet the REPowerEU goals** for renewable gases
- The revised Gas Directive and Regulation should take **phased approach to implementing new regulation**. Comprehensive market model rules for hydrogen should be only implemented when European hydrogen network is up and running

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Supply and market

2.

Anchor the 35 bcm biomethane and 31 bcm RFNBO domestic production targets in EU legislation

By end of 2022

- Biomethane from 3 bcm (32 TWh) today to 35 bcm (370 TWh) in 2030
- RFNBO from near zero today to 31 bcm (327 TWh) in 2030
- Set **mandatory targets in RED II revision** and ask Member States to develop and implement **national policies**
- Set up **public-private cooperation** to meet the biomethane target
- **Facilitate imports** from non-EU countries (interconnectors, terminals and certification schemes)

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Supply and market

3.

Implement Union data-base and gas GO systems with urgency to enable well-functioning EU market for renewable gases

By end of 2022

- Develop the **Union database** and system of **gas guarantees of origin as soon as possible**
- **Extend the Union database** to cover all end use sectors (not just transport)
- **Allow trade of certified renewable gases** as long as the grid is **physically interconnected** (as opposed to direct capacity bookings)

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Supply and market

4.

Mobilise sustainable feedstock supply chains to scale up biomethane production.

By end of 2022

- **Mobilise waste and residue feedstocks** immediately (cheapest, highest GHG emission savings)
- Set out **clear approach** for the use of **sequential cropping**

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Supply and market

5.

Make the RFNBO production rules more flexible and update the electrolysis target in the EU Hydrogen Strategy

By end of 2022

- Implement temporal correlation with **monthly or yearly matching** (as opposed to hourly)
- **Update target** for installed **electrolysis capacity** in the EU (EU Hydrogen Strategy)
- Accept **additionality** from RES plants **up to 5 years** older than electrolysers (as opposed to 20 years)
- Allow **contracting only part** of the total RES plant capacity by RFNBO producers

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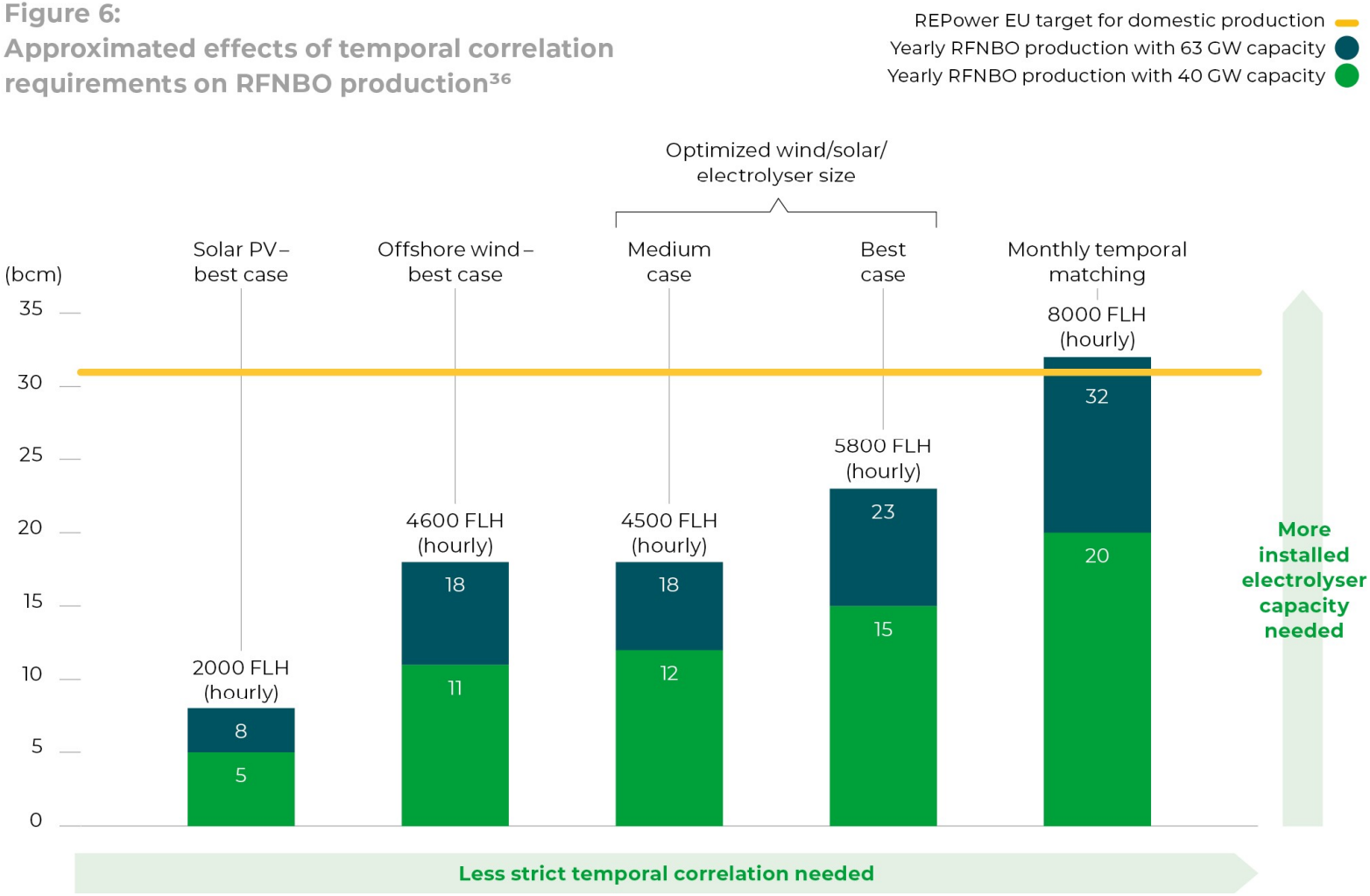
Figure 6:
Approximated effects of temporal correlation requirements on RFNBO production[36]



Funding and permitting

6.

Allocate and increase funds to fast-track commercialisation of renewable gas technologies

By end of 2022

- **Include renewable gases** in General Block Exemption Regulation for State aid rules
- **Earmark funds** in Innovation and Modernisation Funds and revenues from carbon border tax adjustment mechanism
- Implement **stronger requirements** on the use of proceeds from EU Emission Trading Scheme

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Funding and Permitting

7.

Simplify and shorten planning and permitting procedures for renewable energy projects

By end of 2023

- **Utilise** Projects of Common Interest (PCI), Important Projects of Common European Interest (IPCEI), and Projects of Mutual Interest (PMI) processes
- **Speed up the planning and permitting** processes for renewable energy projects on the Member State level

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Infrastructure

8.

Facilitate biomethane integration into the gas grid infrastructure

Start now – finish 2030

- **Update gas quality standard** for cross-border gas
- **Identify** necessary **biogas pooling** projects
- Deploy efforts to **minimize connection and grid integration costs**
- Implement **regional mapping** (zoning) of biomethane potential

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Infrastructure

9.

Enable rapid development of an integrated pan-European hydrogen transmission system with ENTSOG in charge of the network planning

Start now – finish 2030

- Task **ENTSOG** to develop a concrete **proposal** to establish an **integrated hydrogen transmission infrastructure** in the upcoming 10-Year Network Development Plan 2024
- **Postpone** establishment of the European Network of Network Operators for Hydrogen
- Implement **unbundling provisions** (horizontal and vertical) in a way that does not poses unnecessary hurdles to the development of hydrogen market and infrastructure

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Infrastructure

10.

Ensure development and proper renumeration of underground hydrogen storage capacities

Start now – finish 2030

- Start with the **development of storage** capacities **as soon as possible**
- Develop a **financing and remuneration model** for hydrogen storage

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For more information:

Download the PDF: https://bit.ly/3wNPpPO

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