

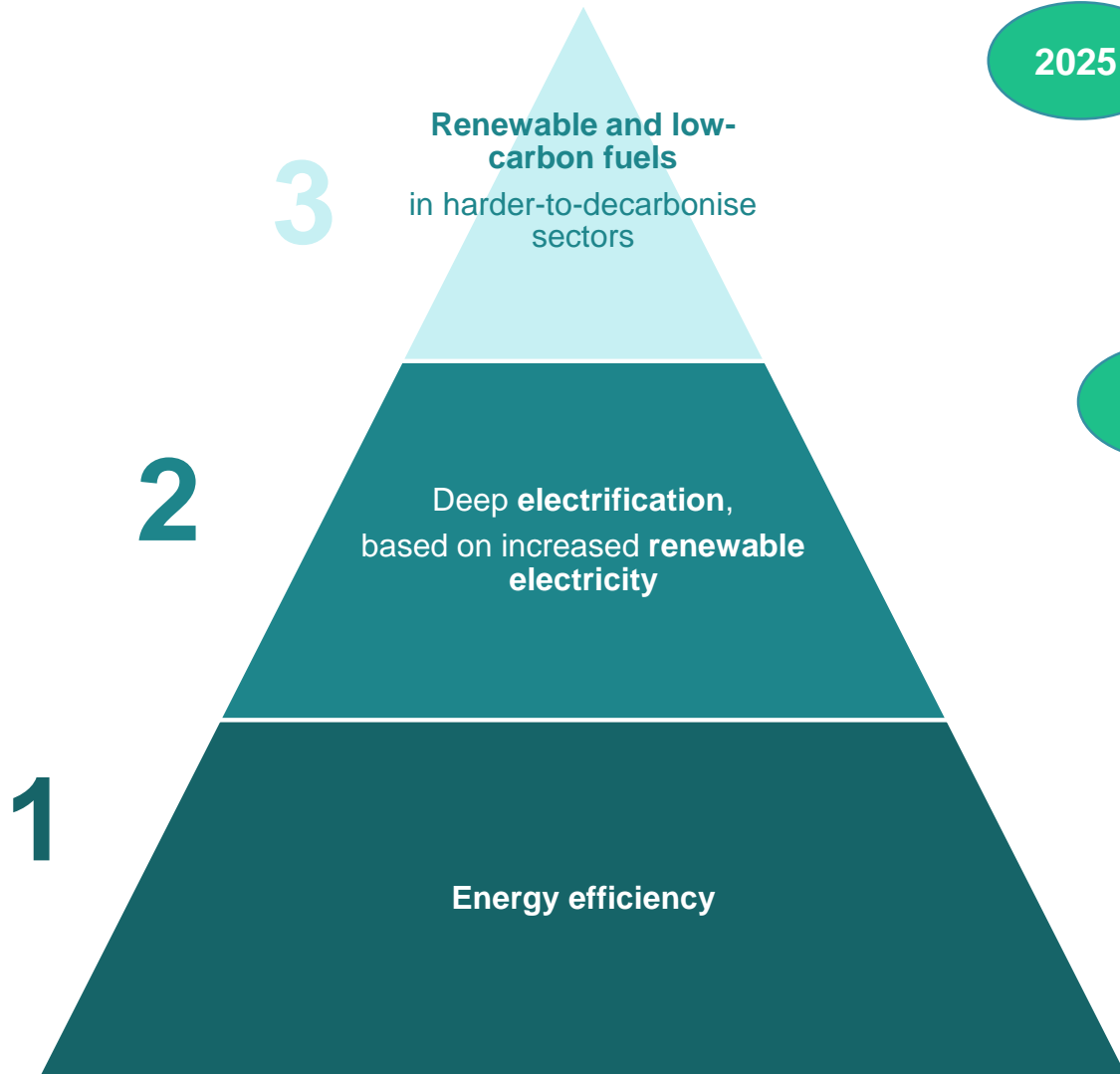


Fit for 55 package

HYDROGEN AND GAS MARKETS DECARBONISATION PACKAGE

IEA Low Carbon Gas Day 25 March
Justin Rosing, European Commission

Context proposal: transforming our energy system



2025

- 6 GW of renewable hydrogen electrolyzers
- Replace **existing hydrogen production**
- **Regulation** for liquid hydrogen markets
- Planning of hydrogen infrastructure

2030

- 40 GW of renewable hydrogen electrolyzers
- New applications in steel and transport
- Hydrogen for electricity balancing purposes
- Creation of “**Hydrogen Valleys**”
- **Cross-border** logistical infrastructure

2050

- REPowerEU:** 20 million tonnes renewable H2
- 5,6 mt in H2 Strategy
 - 5 mt additional H2 produced in Europe and 10 mt H2 imported
 - Additional **40 GW** electrolyser capacity

- Scale-up to **all hard-to-decarbonise sectors**
- EU-wide infrastructure network

Hydrogen and gas markets decarbonisation package: main policy objectives

Current gas framework insufficient to cost-effectively and sustainably achieve 55% GHG reduction and climate-neutrality by 2050.

- I. Enabling the development of **dedicated hydrogen** infrastructure and market, allowing hydrogen to become a key component of the energy sector.
- II. Facilitating access of into the existing gas network **renewable and low carbon gases**
- III. **Fostering network planning** electricity, gas and hydrogen
- IV. Improving and promoting **consumer** engagement

Policy aim 1:

Enabling the development of dedicated hydrogen infrastructure and market

Policy aim 1: Regulatory framework to cater for staged-development hydrogen infrastructure: networks

Transition phase

2030

End phase

- TPA: Negotiated access: flexibility to agree on tariffs (opt-in in regulation possible)
- All vertical unbundling models allowed for H2 network operators
- Legal separation between gas and H2 network operators. Cross financing of H2 networks by natural gas network revenues allowed subject to conditions
- Existing private H2 networks temporarily exempted from unbundling and TPA rules until 2030, or once expanded, or if integrated in broader network

- TPA: Regulated access regime + no tariffs at cross-border points.
- H2 network operators are ownership unbundled or networks are governed by independent system operator
- Geographically confined networks exempted from vertical unbundling until integration in regulated network or connection request by a second H2 producer.
- Equal regulatory regime for intra-EU and H2-import pipelines

Policy aim 1: Regulatory framework to cater for staged-development hydrogen infrastructure: storage and terminal facilities

Hydrogen Storage facilities

- Scope: large scale underground storage facilities
- Easily replicable storage facilities not in scope
- Scarcely available (risk of natural monopoly) & important systemic function

Regulated TPA from the start as well as after 2030

Hydrogen Terminals

- Scope: installation dedicated to transformation of imported liquid hydrogen or ammonia into gaseous hydrogen for injection in dedicated hydrogen network.
- Expected competition not only among terminals but in particular among means of hydrogen import

Negotiated TPA from the start as well as after 2030

Certification for low-carbon hydrogen and synthetic fuels

Low carbon hydrogen = hydrogen, the energy content of which is derived from **non-renewable sources**, which meets **a greenhouse gas emission reduction threshold of 70% (benchmarked against a fossil fuel alternative)**

Harmonised certification system for renewable H2 and low carbon hydrogen

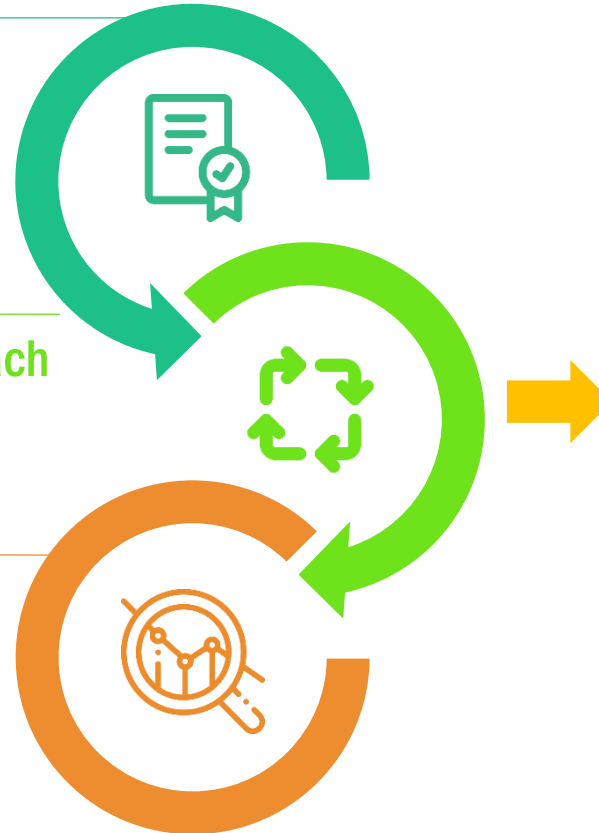
Based on the existing good practices of voluntary and national certification schemes under RED II

Applying a similar life-cycle emission approach

In certifying all types of low carbon hydrogen

Develop a methodology to assess emissions for low carbon hydrogen

Through a Delegated Act to be adopted by the end of 2024, based on the methodologies developed for RFNBOs/RCFs under RED II



Ensure a **level playing field** in assessing the full greenhouse gas emissions footprint of decarbonisation options, based on renewable H2 and low carbon hydrogen

Allow EU Member States to **effectively compare** and consider them in their energy mix

Policy aim 2:
**Facilitate access of renewable and low-carbon gases to
existing gas network**

Policy aim II: Facilitating access of renewable and low-carbon gases into the existing gas network

- Removing cross-border tariffs for renewable and low carbon gases. Similarly, in the future for dedicated hydrogen network no cross-border tariffs will apply.
- Allowing and promoting renewable and low-carbon gases full market access. Allowing for **tariff reduction for the injection and connection of renewable and low-carbon gases.**
- Measures to **facilitate gas storages and LNG terminals to receive renewable and low carbon gases.**
- Introducing a **5% cap for hydrogen blends at interconnection points** between Member States to avoid cross-border flow restrictions due to differences in blending, which network operators must accept. **No blending obligation;** voluntary agreements for higher blends possible.
- More transparency and better use of free capacities at LNG terminals and gas storages allowing more flexible gas trade and use of the terminals and storages.

Policy aim 3:

Fostering network planning electricity, gas and hydrogen

Policy aim III: Fostering network planning: electricity, gas and hydrogen

Single network development plan at national level of all gas TSOs.

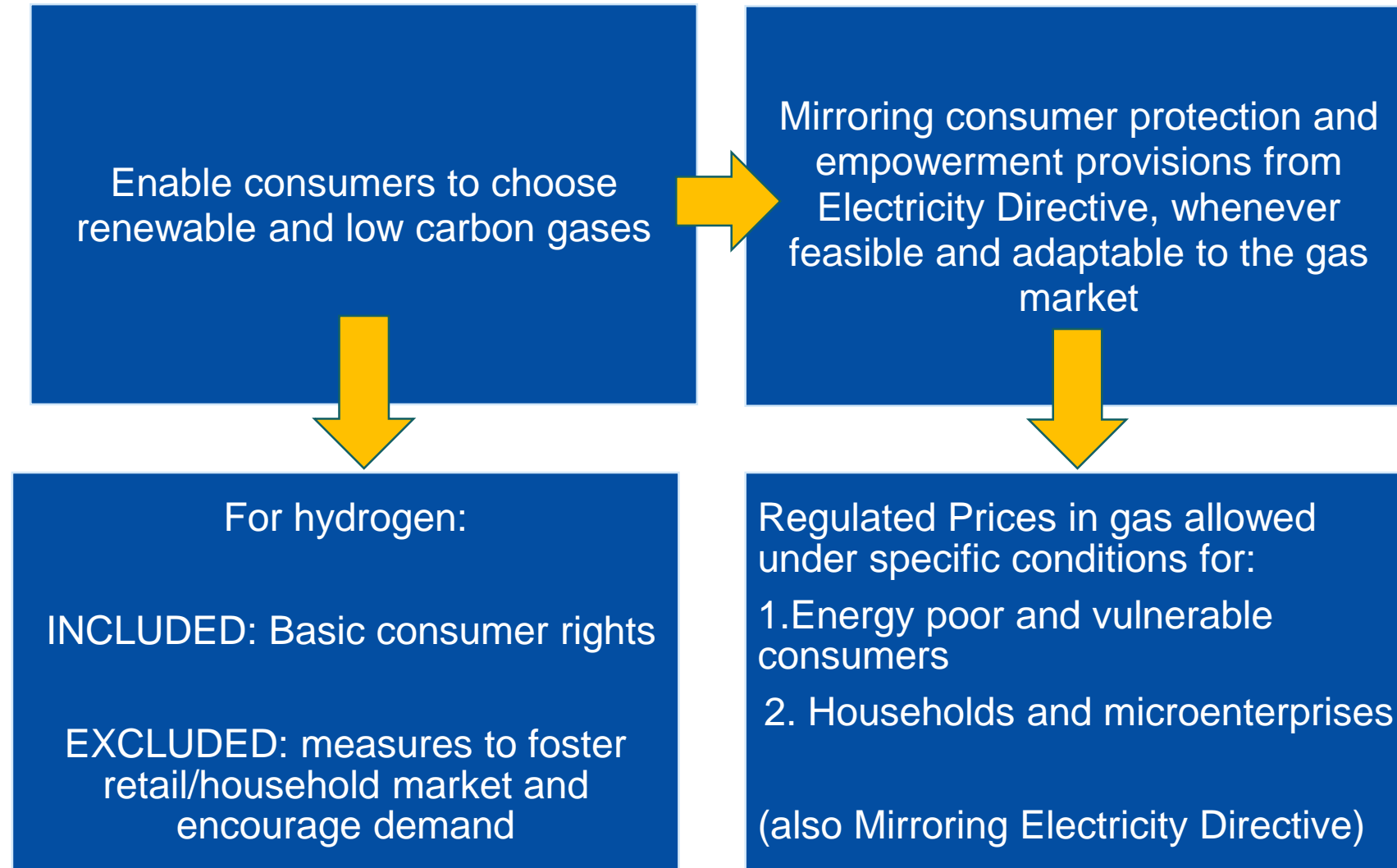
Gas network operators include information on infrastructure that can or will be decommissioned (and could potentially be repurposed for transport of hydrogen).

Alignment with National Energy and Climate Plans (NECPs) and Union wide Ten Year Network Development Plan.

Separate **hydrogen network development reporting** to ensure that construction of hydrogen system is based on realistic and forward looking demand projection.

**Policy aim 4:
Improving and promoting consumer engagement**

IV. Promote consumer engagement in renewable and low carbon gas markets





Thank you!

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