



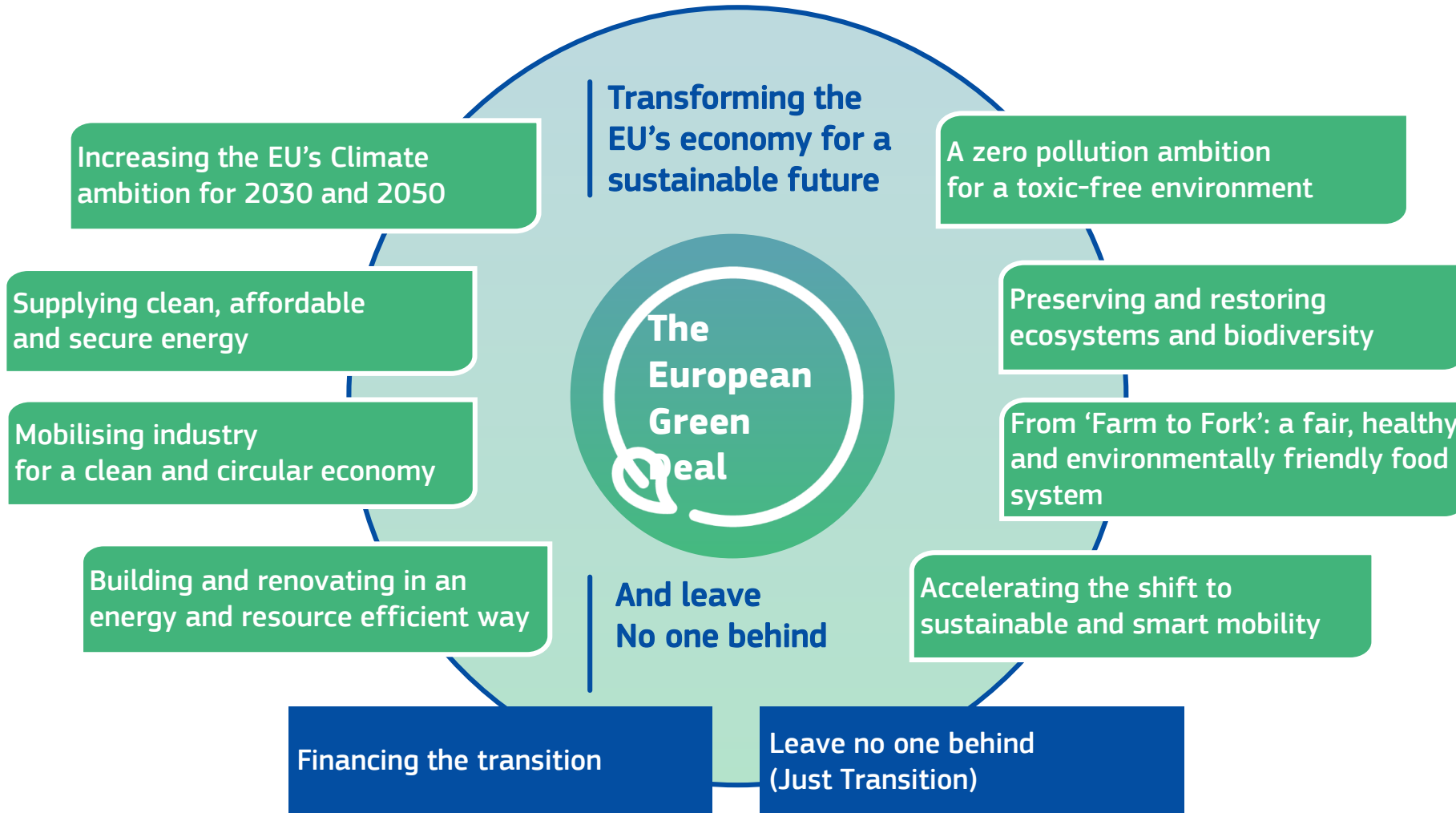
EU Instruments to Promote and Secure the Decarbonisation of Industry through Hydrogen

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The European Green Deal



The EU as a global leader

A European Climate Pact

Laying the foundation for a climate-neutral energy system

Energy System Integration Strategy

A more **circular and energy efficient** energy system

1

A **deep electrification** of consumption, based on **renewable electricity**

2

The use of **renewable and low carbon fuels (incl. hydrogen)** in hard-to-abate sectors

3

Hydrogen Strategy

A full value chain approach to upscale hydrogen

By 2030: 40 GW of renewable electrolysers

+

Clean Hydrogen Alliance

REPower EU: The Hydrogen Accelerator

- **EU production:** 10 million tonnes (333 TWh)
- 80-100 GW electrolysers
- Infrastructure, storage, terminals and ports
- 28-38 B€ pipelines + 6-11 B€ storage
- **Imports:** 10 million tonnes
- Three main import corridors
- Green Hydrogen Partnerships

Under REPowerEU, the Commission also proposed an EU Energy Platform, which aims to ensure security of supply by purchasing natural gas, LNG and hydrogen for the Member States.

RED conclusion and Hydrogen Targets

- On 12 September, amendments were approved by the Parliament for RED III. RED III sets the Union-wide targets for the use of RFNBO, setting clear demand-side potential for the use of renewable hydrogen by 2030. The following RFNBO targets were included:
 - In industry, a target of up to 42% of RFNBO by 2030, expanding to 60% by 2035.
 - In transport, the agreed target for renewables is 29% or 14,5% reduction of emission intensity of fuels. Furthermore, at least 5.5% shall be advanced biofuels and RFNBO by 2030, with a minimum of 1% RFNBO.

Additionality delegated act – grid electricity

Additionality

- Hydrogen production should add to the deployment of renewable energy

Temporal correlation

- Renewable hydrogen should be produced when renewable electricity is available

Geographic correlation

- There should be no grid congestion between the place where the renewable electricity is produced and where the renewable hydrogen is produced

Hydrogen Corridors

To facilitate the import of up to 10 million tonnes of renewable hydrogen the Commission will support the development of three major hydrogen import corridors:

- Via the Mediterranean
- The North Sea area
- With Ukraine



Figure 1: Potential H₂ supply corridors, European Commission, RePowerEU Communication Action Plan, May 2022.

Projects of Common Interest (PCIs)

- Projects of Common Interest (PCIs) are key cross border infrastructure projects that link the energy systems of EU countries. They intend to help the EU achieve its energy policy and climate objectives.
- Priority corridors are identified through the Trans-European Networks for Energy (TEN-E) policy, a policy framework focused on linking the energy infrastructure of EU countries.
 - Under the TEN-E framework, eleven priority corridors and three priority thematic areas have been identified.
- The Connecting Europe Facility (CEF) aims to accelerate investments in Europe's transport, energy, and digital infrastructure network, and supports the implementation of PCIs in the TEN-E priority corridors and areas.

EU funding

- **Recovery and Resilience Facility** is a temporary instrument that is the centrepiece of NextGenerationEU – the EU’s plan to emerge stronger and more resilient from the energy crisis.
- **ERDF, Cohesion Fund, Just Transition Fund** where hydrogen is among the eligible areas and **Smart Specialisation Platform**
- **Modernisation Fund** based on the ETS allowance revenue, that could also benefit the 10 MS
- **Connecting Europe Facility Energy** to support cross-border energy infrastructure projects
- On **Research and innovation**:
 - **Horizon Europe** (including **Clean Hydrogen Partnership** with a first call of EUR 300 million)
 - **EU ETS Innovation Fund** (supports the demonstration of innovative technologies and innovations in sectors such as renewables, and the **Hydrogen Bank**)

European Hydrogen Bank

- will be a financial policy instrument (not a physical entity) which de-risks and creates bankable hydrogen projects, ensures competition on EU-level and avoids over-subsidizing projects;
- will include a domestic pillar which will help address the initial financial challenges in order to create an emerging renewable hydrogen market.
- will also include an international pillar to facilitate renewable hydrogen imports to the EU.

A pilot auction for the Hydrogen Bank shall be conducted in November. The first round is dedicated to supporting RFNBO.

In May 2023, the Commission announced a collaboration with Germany's H2Global support scheme. Together, they will work on establishing a European auction designed to target international hydrogen imports.

European Hydrogen Bank: Activities

European Hydrogen Bank

1 Domestic market creation

Green premium auction(s) under the EU ETS Innovation Fund (DG CLIMA)

2 Imports to the EU

Green premium auction(s) for renewable hydrogen imports (DG ENER)

3 Transparency and coordination

- Demand assessments
- Hydrogen flows

- Infrastructure needs
- H2 cost data

4a Existing European financing instruments

- InvestEU
- Structural funds
- Innovation Fund grants

4b Existing international financing instruments

- Concessional loans
- Blending
- Guarantees

Net-Zero Industry Act

- Aims to strengthen the resilience and competitiveness of net-zero technologies by scaling up manufacturing of clean technologies in the EU.
- The 2030 goal for the EU's overall strategic net-zero technologies manufacturing capacity is to reach at least 40% of the EU's deployment needs.
- NZIA will facilitate investments in net-zero technology manufacturing projects. It will streamline the process for project promoters to establish net zero industrial manufacturing. Furthermore, it will improve market access in public procurement procedures by addressing key drivers of net-zero technology manufacturing investments.

Creating a global hydrogen market

- Multilateral cooperation:
 - Clean Energy Ministerial (CEM)
 - Mission Innovation (MI)
 - International Platform for Hydrogen and Fuel Cells in the Economy (IPHE) – IEA&IRENA
- The EU has created several MoUs regarding hydrogen with Egypt, Japan, Namibia, and Ukraine.



Thank you