



State Aid: Commission approves up to €5.2 billion of public support by thirteen Member States for the second Important Project of Common European Interest in the hydrogen value chain

Brussels, 21 September 2022

The Commission has approved, under EU State aid rules, a second Important Project of Common European Interest ('IPCEI') to support research and innovation, first industrial deployment and construction of relevant infrastructure in the hydrogen value chain.

The project, called "**IPCEI Hy2Use**" was jointly prepared and notified by thirteen Member States: Austria, Belgium, Denmark, Finland, France, Greece, Italy, Netherlands, Poland, Portugal, Slovakia, Spain and Sweden.

The Member States will provide up to €5.2 billion in public funding, which is expected to unlock additional €7 billion in private investments. As part of this IPCEI, 29 companies with activities in one or more Member States, including small and medium-sized enterprises ('SMEs') and start-ups, will participate in 35 projects.

IPCEI Hy2Use will cover a wide part of the hydrogen value chain by supporting (i) the construction of hydrogen-related infrastructure, notably large-scale electrolyzers and transport infrastructure, for the production, storage and transport of renewable and low-carbon hydrogen; and (ii) the development of innovative and more sustainable technologies for the integration of hydrogen into the industrial processes of multiple sectors, especially those that are more challenging to decarbonise, such as steel, cement and glass. The IPCEI is expected to boost the supply of renewable and low-carbon hydrogen, thereby reducing dependency on the supply of natural gas.

Several projects are expected to be implemented in the near future, with various large-scale electrolyzers expected to be operational by 2024-2026 and many of the innovative technologies deployed by 2026-2027. The completion of the overall project is planned for 2036, with timelines varying in function of the project and the companies involved.

Norway, as part of the European Economic Area, also participates to the IPCEI 'Hy2Use' with two individual projects. The EFTA Surveillance Authority is in charge of assessing State aid notified by Norway.

IPCEI Hy2Use follows and complements the first IPCEI on the hydrogen value chain, the IPCEI "Hy2Tech", which the Commission approved on [15 July 2022](#). While both IPCEIs address the hydrogen value chain, Hy2Use focuses on projects that are not covered by Hy2Tech, namely hydrogen-related infrastructure and hydrogen applications in the industrial sector (while Hy2Tech focuses on end-users in the mobility sector).

Commission assessment

The Commission assessed the proposed project under EU State aid rules, more specifically its [Communication on Important Projects of Common European Interest](#).

Where private initiatives supporting breakthrough innovation and the construction of large-scale infrastructure of great EU importance fail to materialise because of the significant risks such projects entail, IPCEI enable Member States to jointly fill the gap to overcome these market failures. At the same time, they ensure that the EU economy at large benefits from the investments and limit potential distortions to competition.

The Commission has found that the IPCEI Hy2Use fulfils the required conditions set out in its Communication. In particular, the Commission concluded that:

- The project contributes to a **common objective** by supporting a key strategic value chain for the future of Europe, as well as the objectives of key EU policy initiatives such as the [European Green Deal](#), the [EU Hydrogen Strategy](#) and the [REPowerEU Plan](#).
- All 35 projects part on the IPCEI are highly ambitious, as they aim at **developing**

technologies and infrastructure that go beyond what the market currently offers and will allow major improvements in performance, safety, environmental impact, as well as on cost efficiencies.

- The IPCEI also involves significant technological and financial risks. Therefore, **public support is necessary to provide incentives to companies to carry out the investment.**
- Aid to individual companies is limited to what is **necessary, proportionate and does not unduly distort competition.** In particular, the Commission has verified that the total planned maximum aid amounts are in line with the eligible costs of the projects and their funding gaps. Furthermore, if large projects covered by the IPCEI turn out to be very successful, generating extra net revenues, the companies will return part of the aid received to the respective Member State (**claw-back mechanism**).
- The results of the project will be widely shared by participating companies benefitting from the public support with the European scientific community and industry, beyond the companies and countries that are part of the IPCEI. As a result, **positive spill-over effects will be generated throughout Europe.**

On this basis, the Commission concluded that **the project is in line with EU State aid rules.**

Funding, beneficiaries and amounts





















The IPCEI will involve **35 projects from 29 companies**, including SMEs and start-ups, with activities in one or more Member States. The direct participants will closely cooperate with each other through numerous planned collaborations, as well as with over 160 external partners, such as universities, research organisations and SMEs across Europe.

The figure below presents the overall structure of Hy2Use, including the individual projects.



Commission approves up to €5.2 billion support by 13 Member States for an Important Project of Common European Interest (IPCEI) in the **Hydrogen value chain** “IPCEI Hy2Use”

Hydrogen Infrastructure

Air Liquide France 
Air Liquide Netherlands - CurtHyl 
Air Liquide Netherlands - ELYgator 
Bay of Biscay Hydrogen (Petronor/Repsol) 
Bondalti 
Cartagena Hydrogen Network (Repsol) 
ENGIE Belgium 
ENGIE Netherlands 
Fluxys 
H2 Aboño (EDP) 
H2-Fifty 
H2 Los Barrios (EDP) 
HyCC 
Iberdrola 
MassHylia (TotalEnergies and ENGIE France) 
Ørsted 
P2X Solutions* 
PKN Orlen 
Shell 
Uniper 

Hydrogen applications in Industry

Borealis 
Enel Green Power/Endesa 
ENGIE Belgium 
Everfuel* 
Hybrit Development 
IAM Caecius 
NextChem 
RINA-CSM 
RONA 
SardHy Green Hydrogen 
Solar Foods* 
South Italy Green Hydrogen 
TECforLime 
TITAN Cement 
VERBUND 

More information on the amount of aid to individual participants will be available in the public version of the Commission's decision, once the Commission has agreed with Member States and third parties on any confidential business secrets that need to be removed.

Quotes by Members of the College of Commissioners

President Ursula **von der Leyen** said: *"Hydrogen can be a game changer for Europe. It is key in diversifying our energy sources and helping us reduce our dependency on Russian gas. We need to bring this niche market to scale. That is why we are creating a Hydrogen Bank. And we will also increase our financial participation in Important Projects of Common European Interest. This will help enabling breakthrough innovation and positive spill-overs for all of the EU economy and help power the economy of the future."*

Executive Vice-President Margrethe **Vestager**, in charge of competition policy, said: *"Developing technologies for low carbon and, in particular, green hydrogen, and building the necessary infrastructure for its deployment, will take us one step closer to making Europe the first climate-neutral continent by 2050. The hydrogen value chain in Europe is in its infancy. This makes it risky for companies and Member States to invest alone in such innovative market. That is where State aid has a role to play to unlock, crowd-in and leverage substantial private investments that would otherwise not materialise."* The full statement is available [here](#).

Commissioner Thierry **Breton**, in charge of the internal market, said: *"Hydrogen is key for the green transition of Europe's energy-intensive industries: it allows us to produce carbon-free steel, cement and chemicals and can replace large quantities of fossil fuels. Europe's industry is a global technology leader in hydrogen. Now is the time to roll out our technologies to Europe's factory floors. Our hydrogen IPCEIs support just that: a first generation of large-scale hydrogen industrial projects in Europe."*

Background

The Commission's approval of this IPCEI is part of the wider Commission efforts to support the development of an innovative and sustainable European hydrogen industry.

In 2018, the Commission established the Strategic Forum for IPCEI, a joint body of representatives from Member States and industry. In November 2019, the Strategic Forum published its report and identified, among others, Hydrogen Technologies and Systems as one of several key strategic value chains for Europe. In July 2020, the Commission published its [EU Hydrogen Strategy](#), setting ambitious goals for clean hydrogen production and use, and launched the [European Clean Hydrogen Alliance](#), bringing together the European hydrogen community (industry, civil society, public authorities).

Jointly with the policy priorities set out in the [European Green Deal](#), notably in terms of environmental sustainability as well as the green transition of industry and transport sectors to climate neutrality, these initiatives played an important role for the objectives of the IPCEI Hy2Use and facilitated the creation of industrial partnerships.

Today's decision is the second IPCEI project approved on the basis of the [2021 State aid IPCEI Communication](#), setting out criteria under which several Member States can support transnational projects of strategic significance for the EU under Article 107(3)(b) of the Treaty on the Functioning of the European Union. The Communication aims at encouraging Member States to support highly innovative projects that make a clear contribution to economic growth, jobs and competitiveness.

The IPCEI Communication complements other State aid rules such as the [Climate, Energy and Environment Aid Guidelines](#), the [General Block Exemption Regulation](#) and the [Research, Development and Innovation \(R&D&I\) Framework](#), which allow supporting innovative projects whilst ensuring that potential competition distortions are limited.

In particular, the Climate, Environmental protection and Energy Aid Guidelines enable public support for investments delivering reductions of greenhouse gas emissions, including projects related the production or use of renewable and low-carbon hydrogen. Some of these projects will complement the IPCEIs on hydrogen and are currently being assessed by the Commission as a matter of priority.

The IPCEI Communication supports investments for R&D&I, first industrial deployment and construction of infrastructure on condition that the projects receiving this funding are highly innovative, of European relevance and do not cover mass production or commercial activities. They also require extensive dissemination and spillover commitments of new knowledge throughout the EU, as well as a detailed competition assessment to minimise any undue distortions in the internal market.

The non-confidential version of the decision will be made available under the case numbers

SA.64631 (Austria), SA.64641 (Belgium), SA.64636 (Denmark), SA.64628 (Finland), SA.64670 (France), SA.64654 (Greece), SA.64645 (Italy), SA.64650 (Netherlands), SA.64627 (Poland), SA.64754 (Portugal), SA.64634 (Slovakia), SA.64623 (Spain), and SA.64652 (Sweden) in the [State Aid Register](#) on the [competition](#) website once any confidentiality issues have been resolved. New publications of state aid decisions on the internet and in the Official Journal are listed in the [State Aid Weekly e-News](#).

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Related documents

[IPCEI Hy2Use_en.pdf](#)