

The hydrogen strategy for Europe

September 17, 2020

By Thara Safi Couplet

Reaching climate neutrality

On **July 8, 2020**, the European Commission presented its Communication on a Hydrogen Strategy for a Climate-Neutral Europe.

This strategy is part of the European Union's desire to reduce greenhouse gas emissions by 2030 and to become the first climate-neutral continent by 2050, as defined in the **European Green Deal**.¹ It also meets the **climate global goals** shared by many states such as the United Nations' seventh sustainable development goal² and the Paris agreement³.

Finding an alternative to fossil fuels

Hydrogen is a source of energy which can be used in several sectors such as **industry, transport, building and electricity**.

The main benefit of clean hydrogen is the lack of CO₂ emissions and, therefore, a very significant reduction of air pollution to meet the ambitious climate objectives of the European Union (EU). Linked with the **New Industrial Strategy for Europe**⁴ and the future **Sustainable and Smart Mobility Strategy**,⁵ the hydrogen plan aims to **substitute renewable and low-carbon hydrogen for fossil fuels**. By transforming its energy mix, the European Union will be able to implement the **European Green Deal** and decarbonize a large number of sectors. To be renewable, hydrogen has to be produced using mainly **wind and solar energy**. On the one hand, the development of renewable hydrogen is one of the main priorities of the EU concerning the energy transition. While on the other, the low-carbon hydrogen is also needed in the short and medium terms to initiate the use of this kind of energy at European scale.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52019DC0640&from=EN>

² <https://www.un.org/sustainabledevelopment/>

³ https://unfccc.int/files/essential_background/convention/application/pdf/english_pari_agreement.pdf

⁴ Presented by the European Commission on March 10, 2020

⁵ **Public consultation** opened from July 1, 2020 to September 23, 2020; Commission adoption planned for fourth quarter 2020



Investing massively in hydrogen by 2050

The hydrogen strategy presented by the European Commission is divided into three phases:

- **From 2020 to 2024**, the European objective is to have at least **6 gigawatts of renewable hydrogen electrolyzers** and to produce **1 million tonnes of renewable hydrogen**.
- **From 2025 to 2030**, hydrogen should constitute an essential part of the energy mix. The European objective is to have at least **40 gigawatts of renewable hydrogen electrolyzers** by 2030 and to produce at least **10 million tonnes of renewable hydrogen**.
- **From 2030 to 2050**, renewable hydrogen technologies should **be used at a large scale** including the hard-to-decarbonise sectors.

The European Commission envisages **180 to 470 billion euros** of overall investment in renewable hydrogen in Europe by 2050. The main financing sources are the **InvestEU** programme, the **Recovery Plan**, the **European Regional Development and the Cohesion Funds**, the **Just Transition Mechanism** and **Horizon Europe**.

Apart from the climate benefits of the European strategy, the hydrogen plan should contribute to an increase of **European research and innovation**, participate to **economic growth** and **stimulate employment**.

To implement the hydrogen policies, the [European Clean Hydrogen Alliance](#) was launched on **July 8** by European Commissioners Thierry Breton, Frans Timmermans and Kadri Simson. Presented for the first time on **March 10** in the **New Industrial Strategy for Europe**, the Alliance brings together industrial stakeholders, the civil society and the national, regional and local authorities. This group coordinates the national and European policies.

All European organizations involved in the low-carbon and renewable hydrogen can join the Alliance. Once a year a Hydrogen Forum will be organized as well as many roundtables for the various industrial sectors.

The Alliance is responsible for the implementation of the **New Industrial Strategy for Europe** and should **support investments related to hydrogen by creating a pipeline of concrete projects**.

Next steps

By the end of 2020	Through the European Clean Hydrogen Alliance, develop an investment agenda
2020	Propose measures to facilitate the use of hydrogen in the transport sector in the Commission's upcoming Sustainable and Smart Mobility Strategy
Q3 2020	Launch a Green Airports and Ports call for proposals as part of the European Green Deal call under Horizon 2020



Contribute to the European discussions

Since the beginning of its mandate, in December 2019, the European Commission has defined its priorities for five years. As highlighted by the Green Deal, the EU climate objectives are ambitious and the energy transition will impact all sectors. As of now, the stakeholders have to take part of the debate in order to participate in the elaboration of the future EU energy policies.

For more information: info@lighthouseeurope.com