

Energy transition in France and Europe

Towards a European “hydrogen backbone”: GRTgaz and ten other gas transporters present their plan as part of the European strategy

One week after the European Commission published its hydrogen strategy for a climate-neutral Europe highlighting the need to create a transnational network of hydrogen pipelines, GRTgaz and ten other gas infrastructure companies, operating in nine Member States, put forward their vision for the development of this European “hydrogen backbone”.

Thierry Trouvé, Managing Director of GRTgaz, states that: *“GRTgaz places carbon neutrality at the heart of its long-term strategy for the energy transition. It is directing its infrastructure in a sustainable manner towards the transport of low-carbon and renewable gas and hydrogen.”*

The work carried out by GRTgaz with Enagás, Energinet, Fluxys Belgium, Gasunie, NET4GAS, OGE, ONTRAS, Snam, Swedegas and Teréga, supported by Guidehouse, shows that these companies’ existing gas networks can be adapted to transport hydrogen at an affordable cost.

For GRTgaz and its counterparts in Europe, the gradual emergence of a hydrogen network from the middle of the decade is possible, with an initial 6,800 km network connecting the various European Hydrogen Valleys by 2030.

A 23,000 km hydrogen network is planned for 2040. This European “hydrogen backbone” will be made up of 75% converted natural gas pipelines and 25% new hydrogen pipelines. Ultimately, two parallel and complementary gas transmission networks will coexist and contribute to climate neutrality. One network will be dedicated to hydrogen, and the other to (bio)methane.

The cost of creating this network is estimated at between EUR 27 and 64 billion. This is much lower than that of a completely new network, and reasonable with regard to the overall costs needed to develop the production and uses of low-carbon and renewable hydrogen. The average transmission cost is estimated at between EUR 0.09 to 0.17 per kg of hydrogen per 1,000 km, compared to the European strategy’s target production cost for renewable hydrogen of EUR 2.5 to 5.5 per kg. This European “hydrogen backbone” will

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GRTgaz is one of the European leaders of gas transmission and a world expert in gas systems. In France, the company operates more than 32,000 km of buried pipelines to transport gas from suppliers to consumers connected to its network (managers of public distribution systems that serve municipalities, power plants and more than 700 industrial sites). GRTgaz carries out public service missions to guarantee the continuity of gas transmission and offers its customers services providing access to the network and improving their energy performance. With its subsidiaries Elengy, the European leader in LNG terminal services, and GRTgaz Deutschland, the operator of the MEGAL transmission network in Germany, GRTgaz plays a key role in the European gas infrastructure scene. It also exports its know-how internationally, in particular thanks to the services developed by its research centre, RICE (Research & Innovation Center for Energy). As a player in the energy transition, GRTgaz invests in innovative solutions to accommodate as much renewable gas as possible on its network, including hydrogen, to provide support for these new sectors, and thus contribute to achieving carbon neutrality. Find us on grtgaz.com, energiesdespossibles.fr, @GRTgaz, Instagram and Facebook.

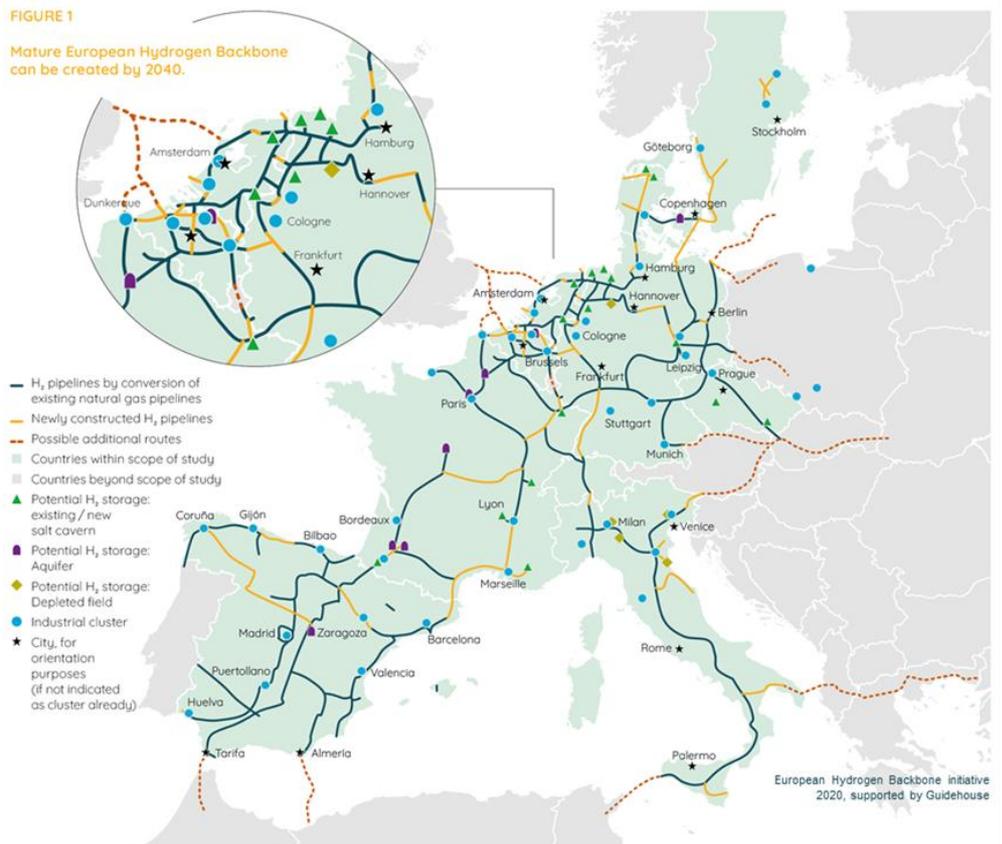
make it possible to transport hydrogen over long distances at a lower cost. This will optimise overall development costs by producing low-carbon and renewable hydrogen where it is inexpensive and returning it to the major consumption centres. The estimate remains relatively wide at this stage. This is mainly due to uncertainties linked to the cost of compressors, depending on where they are installed.

The group of infrastructure operators is convinced that the European "hydrogen backbone" will be able to cover the entire European Union. The group invites other gas infrastructure operators to join them in developing this plan for a dedicated hydrogen infrastructure.

The report on the vision for a European "hydrogen backbone" (*European Hydrogen Backbone - How a dedicated hydrogen infrastructure can be created*) is available on the GRTgaz website.

FIGURE 1

Mature European Hydrogen Backbone can be created by 2040.



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