



GIE contribution to the European Commission's public consultation on Clean Energy – an EU Hydrogen Strategy

GIE has 70 members from 26 European countries. They operate the European gas infrastructure (gas storages, LNG terminals and transmission pipelines) and provide citizens with more than fifty thousand jobs, while supplying around 25% of EU's primary energy consumption. GIE shares EU's ambition of reaching climate neutrality by 2050.

In light of the recent COVID-19 crisis, a fast and cost-efficient transition to a decarbonised society is possible if all available technologies and resources are considered. The European gas infrastructure and hydrogen will play a key role in contributing to the post-pandemic economic recovery and achieving full decarbonisation of energy supply in all sectors by 2050. In this respect, GIE supports the continuation of the European Union's hydrogen initiatives for building a comprehensive and open-minded EU's Hydrogen Strategy.

As highlighted by Commission's Executive Vice-President Frans Timmermans during his press briefing about the EU's proposed recovery plan on 28 May, the existing gas infrastructure is a valuable asset for the future development of the hydrogen value chain within the EU.

- The gas transmission system, thanks to its ability to integrate varying geographies and scales across the EU, can be fit for transporting large volumes of hydrogen over long distances with relatively few additional investments.
- Underground gas storages can provide large seasonal storage of renewable and low-carbon energy, including hydrogen: salt caverns, with some retrofitting, are suited for pure hydrogen and the current assessment on the potential of depleted gas fields is showing potential.
- LNG terminals are well positioned to develop new services and contribute to the energy transition: besides other ways to decarbonise, they can, for example, be the entry door to (imported/exported) hydrogen-based energy carriers.

As the market for hydrogen develops, a dedicated infrastructure may emerge in parallel at different scales, also in clusters where production, demand, transportation and storage can be effectively organised, allowing economies of scale, job creation and decarbonisation. Lessons from the experience of existing companies should be drawn to accelerate this development.

Based on this combination of gas assets, hydrogen and its derivatives will enhance a hybrid energy system by benefitting from possible synergies between the gas and electricity infrastructure (optimising electrical grid expansion through better utilisation of existing gas infrastructure) while providing flexibility services under different temporal and geographical dimensions (smoothing out price fluctuations and avoiding demand curtailment).

As a result, the Hydrogen Strategy should encourage gas infrastructure operators to continue with decarbonisation activities aimed at increasing the potential and actual quantities of hydrogen, developing, operating and owing innovative technology facilities and supporting their scaling-up, in a way that does not distort market competition, complies with the applicable regulatory framework and secures third party access to maximise societal benefits. GIE members are already initiating numerous initiatives and pilot projects to support the deployment of clean hydrogen - produced from electrolysis



of low carbon electricity generation, natural gas steam reforming with CCS or natural gas pyrolysis - and would greatly benefit from appropriate regulatory measures to ensure the creation of a competitive market.

In this context, GIE calls for:

- A common terminology via clear, accurate and science-based definition of renewable and low-carbon gases, including clean hydrogen,
- A set of national binding consumption targets for renewable and low-carbon gases, including hydrogen, which consider technological developments of Member States,
- An EU-wide credible documentation of the green value of renewable and low-carbon gases, including hydrogen, such as Guarantees of origin (GOs), with a technology-neutral approach and compatible with the EU ETS,
- The adjustment of levies, grid charges and taxes to reflect societal benefits provided by the gas infrastructure and the avoidance of double charging,
- The amendments of relevant EU legislation (e.g. TEN-E regulation) to enable network owners to operate several categories of gases (including hydrogen), and providing them with incentives to adapt their infrastructures to cope with the coexistence of different gases,
- The alignment of the Hydrogen Strategy with upcoming policy measures, particularly the Strategy for Energy System Integration and the sustainable finance taxonomy, to ensure a fully integrated market in view of the development of renewable and low-carbon gases, including hydrogen,
- The upcoming Offshore Wind Strategy as an opportunity to rework how overall system efficiency gains can be achieved by looking at the optimal way to bring hydrogen from supply source to demand area (i.e. offshore conversion). Those are issues we need to address to allow the whole infrastructure to play its role.

For more details on hydrogen-related projects by GIE members, please refer to the list below:

- Austria: [Underground Sun Storage](#) by RAG Austria
- Belgium: P2G by Eoly and Fluxys, Hydrogen transport and storage by Fluxys and ENGIE and others, Hy Off Wind by Fluxys and others
- Denmark: M/R Helle by Energinet and others, HyBalance by Energinet and others
- France: Jupiter 1000 by GRTgaz, HyGreen Provence by ENGIE
- Germany: Bad Lauchstädt Energy Park by Uniper, VNG and ONTRAS; [Membrane filter technology](#) by ONTRAS and GRTgaz
- Hungary: [Hydrogen storage in depleted fields](#) by Hungarian Gas Storage
- Italy: Blending Hydrogen for Decarbonisation by Snam: injection of a hydrogen and natural gas mix in the high-pressure transmission network
- The Netherlands: [North Sea Wind Power Hub](#) by Energinet and Gasunie; [NortH2](#) by Gasunie and others
- Poland and Denmark: the [Baltic Pipe](#) project
- UK: HyNTS – Hydrogen Injection into the NTS and Hydrogen Deblending by National Grid, Centurion by Storengy, Humber Zero by Uniper, Phillips 66 and VPI Immingham - a large-scale decarbonization and hydrogen project that aims to create zero-carbon industrial cluster in



Humberside (by reducing carbon emissions from power and petrochemical facilities, as well as creating a sustainable platform for industrial growth and economic development).