

### Response from GIE

GIE represents the European gas **transmission operators, gas storage facilities** and **LNG terminals**.

*Our response is based on responding to the aim: “This initiative aims to address the current low decarbonisation and renovation rates across the EU as well as provide a framework for renovation to play a key role in supporting a green and digital recovery.”*

The energy transition will require significant investments, new technologies adapted to local needs, effective policies and behavioral changes. Any proposals will need to be efficient, affordable and convenient for all businesses and consumers. To deliver net zero, we must reduce the carbon intensity of our buildings, which represents the key energy efficiency area among the others.

#### **Reducing the carbon intensity of buildings is key to a green and digital recovery**

Decarbonising our homes and buildings matters to all 450 million EU citizens. There is no single solution for the decarbonisation of buildings. The best solutions will decarbonise buildings in the most cost-effective way to meet the needs of consumers and industry across the different EU regions.

Currently there are limited incentives and obligations to renovate buildings solely for energy efficiency and decarbonization purposes, especially for rented properties. This hampers the ambitions to live up to the targets laid out in the Energy Efficiency Directive. To renovate buildings for energy efficiency and decarbonization purposes, there needs to be a much stronger driver, such as financial support coupled with the appropriate obligations (e.g. mandatory targets). In order to reach the proposed 55% Climate Target by 2030, appropriate measures (such as financial support) will be needed to ensure that everyone who can benefit from improved energy efficiency is able to renovate their properties, not only those who can easily afford it. Dedicated EU financial support and incentives defined by the EU to be utilized on national level are recommended for such projects which contribute to the energy efficiency measures by applying low carbon emission gases like natural and renewable and low-carbon gases. Therefore, difficulties in accessing capital markets and lack of information represent structural obstacles to meet EU energy efficiency goals. Such market barriers should be addressed in the EED revision context.

To deliver the step change in energy efficiency measures (and hence renovation of buildings), there needs to be significant resources allocated to rolling out such measures. Ensuring we have the right skills and adequate resources will be crucial to the success of any proposals.

There needs to be clearly defined roles and responsibilities for the development of decarbonized heat and the development of the required skills to roll out the proposed measures. Also, further

work on the implementation of the decarbonized energy sources with the NECP's respective measures is needed.

EU Member States face different challenges with reducing emissions from buildings, and it is therefore important to offer a wide range of realistic, affordable options. A technology neutral approach is therefore needed to allow the best solutions for each consumer to be determined dependent on their specific circumstances. In this view, “primary” energy consumption (and not “final”) should be always considered to allow a correct comparison between gas and electric technologies (energy losses in conversion, transmission and storage must be considered).

Innovative heating gaseous (including hydrogen) technologies should be taken into full consideration allowing their scale-up so that they could become even more competitive (e.g. micro-CHP with a 95% total heat/power efficiency and gas heat pumps saving >40% of primary energy and recovering energy from the environment). Considering existing buildings renovation constraints (e.g. architectural, historical) these technologies can help meeting the efficiency targets with lower system costs thanks to the already widespread gas infrastructure and without requiring deep renovation of the building envelope. 75% of all buildings in the EU are 26 years or older. Role for highly efficient (as mentioned above) gas/hydrogen- based heating is important. Solutions including hybrid systems are also key for cost optimization.

GIE is convinced that as part of an overall smart sector integration the gas infrastructure can help to decarbonize buildings by integrating increasing shares of renewable and low-carbon gases such as synthetic methane, hydrogen, biomethane and biogas. Hydrogen and biomethane will have a valuable role to provide low carbon heat to buildings<sup>1</sup>.

The European gas infrastructure plays a crucial role in storing the energy required to secure affordable heating during the winter season and can enhance energy security.

### **Who is Gas Infrastructure Europe**

Dealing with low-carbon and renewable gases, Gas Infrastructure Europe represents the interests of 70 members from 26 European countries. Our members operate the underground gas storages, LNG terminals and transmission pipelines. GIE currently provides citizens with more than fifty thousand jobs, while supplying around 25% of the EU's primary energy consumption. GIE members are committed to deliver climate neutrality by 2050.

**The gas transmission system** is mostly well interconnected across EU's countries and allows for highly economic and efficient supply, transport and storage of enormous amounts of energy from production sites over long distances. Gas grids are already suited for transporting biomethane and can be fit for hydrogen with additional investments.

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<sup>1</sup> Gas for Climate, March 2019: <https://gasforclimate2050.eu/wp-content/uploads/2020/03/Navigant-Gas-for-Climate-The-optimal-role-for-gas-in-a-net-zero-emissions-energy-system-March-2019.pdf>

**Gas storages** can store sustainable and fluctuating energy on a large scale and at low cost, thereby ensuring security of supply. They provide and run flexibility tools from intra-hourly up to seasonal operational requirements from customers enabling a robust and resilient system. Gas storages can also play an important role in storing renewable and low-carbon gases, including hydrogen, in the future: salt caverns, with some retrofitting, are suited for hydrogen and the current assessment on the potential of depleted gas fields is showing their great potential. In a future energy system largely dominated by intermittent energy production from wind and sun, the large flexibility and storage capacity provided by the gas system will be necessary to secure a cost-efficient integration of renewable energy sources.

**LNG terminals** enhance security of supply through source and route diversification and secure access to global and competitive (fossil and renewable) energy sources. They are also an energy flexibility provider. LNG can substitute more polluting fossil fuels, hence reducing CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, noise and particulate matter emissions in maritime and road transport, power and heat generation (i.e. on remote locations not connected to the gas transmission system). LNG terminals can decarbonize by greening the gas upstream, by using low-carbon technologies downstream or can, for example, be the entry door to (imported) hydrogen-based energy carriers.