

## EFET<sup>1</sup> comments on the Roadmap for an EU Hydrogen Strategy

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### A. Context

It is increasingly accepted that decarbonisation by 2050 will be impossible without molecules. Not all industrial use of energy can be electrified, there are not yet efficient mechanisms for storage of electricity over weeks, months and seasons in the volumes that will be necessary, and the intermittency of electricity supply at higher levels of penetration of renewable generation are all challenges that the gas system is well-placed to help address. However, gas must decarbonise in order to contribute.

Additionally, the gas system provides a cost-efficient means of transporting large amounts of energy using already-invested assets, as an alternative to expansion of the electricity transmission grid or increased localised production at the levels that would be needed.

Replacement of natural gas with hydrogen allows the gas system to play an ongoing role in a decarbonised framework using existing assets in many cases. Ultimately, there will be dedicated hydrogen grids, but in the interim, opportunities may exist for blends or co-transportation, subject to design of new operational frameworks and the ability to overcome current technical constraints such as burners being able to accommodate a variable mix. EU support to kick-start the hydrogen market, and in particular to ensure that hydrogen is not disadvantaged against other technologies through the design of support schemes and allocation of transport infrastructure costs, will help to achieve a more efficient decarbonisation strategy.

### B. What does the initiative aim to achieve and how

In order to achieve a cost-effective decarbonisation of the EU economy, EFET believes that it should be underpinned by the five following policy priorities:

1. Setting an ambitious, economy-wide climate neutrality objective at Union level
2. Strengthening the EU ETS in the short term, as it currently applies to power generation and heavy industries, then reforming and expanding it to become a long-term driver for decarbonisation across the EU economy
3. Utilising market-based mechanisms and adapting market instruments whenever financial support for new, low carbon energy sources is considered, while respecting sectoral unbundling rules
4. Ensuring pan-European coordination and cross-border implementation of any financial support schemes for renewable, decarbonised and low-carbon gases, especially in case national end-use prohibitions of hydrocarbons should be foreseen
5. Insisting on technological neutrality of measures, to include a level playing field between power and gas systems, so that users face a cost-reflective allocation of costs across both types of grid, without cross-subsidisation.

<sup>1</sup> The European Federation of Energy Traders (EFET) promotes competition, transparency and open access in the European energy sector. We build trust in power and gas markets across Europe, so that they may underpin a sustainable and secure energy supply and a competitive economy. We currently represent more than 100 energy trading companies, active in over 27 European countries. For more information: [www.efet.org](http://www.efet.org).

These have specific implications for the development of hydrogen: how to promote demand for hydrogen in place of fossil fuels, and where electrification is not achievable or economic; how to use or repurpose existing gas grids and establish new hydrogen grids; how to facilitate the production of renewable hydrogen, but also to recognise the sustainability benefits of hydrogen produced through reformation of methane in combination with CCS and through methane pyrolysis. In turn, the existing legislative framework will need to be adapted and new legislation for hydrogen markets and infrastructure be introduced.

#### 1. Setting an ambitious, economy-wide climate neutrality objective at Union level

The roadmap describes the need for a comprehensive European approach, especially while some member states are producing national hydrogen plans. “Free cross-border flow and trade of hydrogen is an important cornerstone” and “the risk of uncoordinated action, which could lead to market fragmentation” are two areas where EFET strongly supports the Commission’s assessment.

Using the history of natural gas markets, interconnectivity with Ukraine, Russia, the Balkans and Mediterranean neighbours is also recognised as providing the opportunity to bring benefits to the wider region, for collaboration on technical advancement, and to help tackle global issues such as decarbonisation of transport.

Experience of the natural gas market shows how common and harmonised access terms can contribute to cross-border flows, system security, and reliable prices on which consumption and investment decisions can be made. Although the existing Gas Directive addresses the use of the natural gas system for the transportation of *other types of gas*<sup>1</sup>, a more comprehensive legislative framework for hydrogen will be necessary. In principle, unbundling, third party access and other rules applicable to natural gas networks should also apply to hydrogen.

Setting clear overall decarbonisation targets for the whole EU economy is one of the key policy recommendations identified in the recent study<sup>2</sup> carried out by Frontier Economics for EFET (hereafter “the Frontier study”). This report explores how market-based mechanisms can be harnessed to enable cost-effective decarbonisation of the gas system. It points to the need for a coherent policy framework that rewards carbon abatement in a market-based technology-neutral way.

#### 2. Strengthening the EU ETS in the short term, as it currently applies to power generation and heavy industries, then reforming and expanding it to become a long-term driver for decarbonisation across the EU economy

The key role of a credible, harmonised EU-wide carbon pricing scheme as the long-term driver for decarbonisation across the economy is recognised in the Frontier study. There are short-term challenges to strengthen the ETS within the existing scope of installations before reforming and expanding it in ways that includes a recognition of the carbon abatement achieved through replacement of natural gas with (abated) hydrogen, that can be traded equally alongside other technologies that achieve similar effect.

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<sup>1</sup> Directive 2009/73/EC Article 1.2 states that *The rules established by this Directive for natural gas including LNG, shall also apply in a non-discriminatory way to biogas, gas from biomass or other types of gas in so far as such gases can technically and safely be injected into, and transported through, the natural gas system.*

<sup>2</sup> *Gas decarbonisation and sector coupling: ensuring a market-based approach*, report for EFET, available at [https://www.efet.org/Files/Documents/Short\\_Form\\_Report\\_A\\_market\\_based\\_approach\\_to\\_gas\\_decarbonisation\\_and\\_sector\\_coupling\\_Frontier\\_report\\_for\\_EFET.pdf](https://www.efet.org/Files/Documents/Short_Form_Report_A_market_based_approach_to_gas_decarbonisation_and_sector_coupling_Frontier_report_for_EFET.pdf)

Where national hydrogen strategies are being pursued, a clear pathway for integration of such schemes into the EU ETS should be planned.

3. Utilising market-based mechanisms and adapting market instruments whenever financial support for new, low carbon energy sources is considered, while respecting sectoral unbundling rules

Hydrogen must become part of the European internal energy market, which has been an enormous achievement since implementation of the early Electricity and Gas Directives, and contribute to the overall efficiency of the energy system. Nevertheless, it is recognised that existing hydrogen markets will be impacted and consideration should be given to the different end-markets that will be affected.

In order to achieve this, market participants, regulators, TSOs and DSOs could contribute through:

- Providing clear price signals to incentivise investment in the most cost-effective decarbonisation solutions and technologies and enabling the deployment in the most cost-effective locations, irrespective of Member State borders.
- Underpinning a level playing field for technology developers, so that cross-subsidisation or subsidy pancaking for particular technologies may be avoided.
- Facilitating optimisation of grid infrastructure at transmission and distribution levels and increasing integration of power and gas infrastructure.
- Ensuring that producers and suppliers using various technologies face whole system price signals reflecting the costs they impose on gas and power networks, and that economic behaviour and commercial decisions are not distorted by misallocation of legacy system costs that have been irreversibly incurred, nor by the costs of unwarranted expansion and reinforcement of grids in future.

In order to ensure a harmonised regulatory framework for the future gas market in Europe, where hydrogen, as well as other low carbon, renewable and decarbonised gases, are set to play a more prominent role, the European Network Codes and other existing regulations such as Renewable Energy Directive II should be reviewed and adapted accordingly.

Further work is necessary to understand how flexibility markets in hydrogen supply can be achieved to allow consumers to be supplied. The roles of storage, demand side management, and controllable production of sustainable hydrogen will be fundamental to the sector's ability to contribute to an efficient, integrated, decarbonised energy system.

Regulated system operators should maintain their role of neutral market facilitators and similar principles should be extended to new services and technologies including production activities. The construction, ownership and operation of such installations should therefore be provided by the market to ensure optimal use of such assets.

4. Ensuring pan-European coordination and cross-border implementation of any financial support schemes for renewable, decarbonised and low-carbon gases, especially in case national end-use prohibitions of hydrocarbons should be foreseen

While unlikely to be as efficient as a credible long-term carbon price, market-based support mechanisms may provide some assistance in the interim and we recognise that some member states may consider support schemes for new or non-mature decarbonisation technologies from the outset.

These should be strictly market-based, technology-neutral, non-distortive, tradable and open across EU borders, and harmonised as early as possible. They should also be designed in such a way as to contribute to the integrity and effectiveness of the ETS.

5. Insisting on technological neutrality of measures, to include a level playing field between power and gas systems, so that users face a cost-reflective allocation of costs across both types of grid, without cross-subsidisation.

The Roadmap sets out that the strategy for hydrogen but also forms part of the broader initiatives including June 2021 proposals on energy and climate, and the strategy for smart sector (now: energy system) integration. The Climate Law proposal states that “in taking the relevant measures at Union and national level to achieve the climate neutrality objective, Member States and the European Parliament, the Council and the Commission should take into account...cost-effectiveness and technological neutrality in achieving greenhouse gas emissions reductions and removals and increasing resilience.”

Success in the energy transition will depend on factors unknown, such as which technologies – existing and as yet undiscovered – will prove to be capable of being rolled out at scale, with sufficiently declining costs. A framework that allows technologies to compete across power and gas markets and does not try to pick early winners – allowing the most promising to have scope for development – will retain the broadest options to achieve the Climate Target Plan.