



NGO input on the upcoming gas package

Introduction

To ensure consistency with major legal and policy instruments such as the European Green Deal, the “Fit For 55” package, and the Paris Climate Agreement, the framing of the Commission’s “hydrogen and gas decarbonisation package”¹ needs to change fundamentally. **The objective of the package should not be to drive the market uptake of so-called “decarbonised gases” but instead to speed up the transition to a 100% renewable energy system and to create the right incentives to [phase out fossil gas by 2035](#) at the latest.**

The package should trigger a **fundamental reform of the EU’s gas market rules** driving Europe away from its fossil gas dependence, and increasing energy system integration, energy efficiency, energy demand reductions and renewables-based electrification across sectors, particularly for heating and cooling.

The reform should take a very careful approach towards [hydrogen](#) (and biomethane), with the prerequisite that **only 100% renewable hydrogen produced from [additional renewable electricity](#) can play a role in system decarbonisation**. This approach demands strict rules for hydrogen use in priority sectors only (certain processes/uses for energy-intensive industries such as steel and chemicals, long-distance transport) where direct electrification from renewables is not yet possible. Hydrogen used for purposes such as heating buildings and road transport (cars, vans) should be ruled out completely. Further analysis and detailed needs assessments of renewable hydrogen demand in those priority sectors as well as a thorough supply potential assessment should be a prerequisite for future renewable hydrogen production and infrastructure support.

¹ The following legislative proposals are to be revised under that package: the [gas directive](#) (2009/73), the [gas regulation](#) (715/2009) and the [gas security of supply regulation](#) (2017/1938).

Areas that need to be addressed by the Gas Market Reform

Facilitate the rapid decline of fossil gas

In order for the EU to act in line with the Paris Climate Agreement and limit temperature rise to 1.5°C, **fossil gas use must end by 2035**. This must be reflected across all aspects of the gas market reform, including the need to plan for a smaller gas system, manage sensible decommissioning processes and identify stranded assets. It should lead to opening up traditional gas markets for competition with energy savings and renewables, and reforming the governance system to make sure vested interests do not delay this transition.

Methane (the main component of fossil gas) leaks across the entire fossil gas supply chain, from extraction, production to transportation. Methane emissions have already contributed as much as 0.5°C to the global warming experienced today. Detailed and consistent guidelines on the methodology for **measuring and reducing methane leakage** should be provided for any fossil gas phase out pathway.

Focus on heating from sustainable renewable energy sources

Space heating and hot water consumption in buildings are the largest sources of fossil gas consumption in the EU. This [demand](#) can be addressed by a combination of renewable heating, cooling, energy-saving and efficiency measures which have the added value of providing substantial local employment and sustainable development within planetary boundaries. Therefore, the **revision of the gas package should make a clear contribution to the phasing out of fossil gas in heating** and ensure cross-compliance with the Renewable Energy Directive, the Energy Efficiency Directive and the Energy Performance of Buildings Directive to ensure a consistent approach and holistic planning towards the use of 100 % sustainable renewable heating & cooling by 2040.

Renewable hydrogen should only be used in priority sectors; blending should be excluded and repurposing approached with caution

An assessment should be carried out to identify where and which renewable gas can deliver the most emission savings and where more efficient alternatives for emission reductions exist. For example, buildings can be more efficiently heated and cooled through retrofitting schemes, electric heat pumps and district heating networks powered by renewables, while using hydrogen in heating is expensive and inefficient as pointed out by among others the [Potsdam Institute for Climate Impact Research](#), the [Fraunhofer Institute](#), and the [Regulatory Assistance Project](#).

Using hydrogen to heat homes leads to a practice known as blending where hydrogen is mixed with fossil gas. This allows for continued fossil gas use and continued fossil gas dependency. Moreover blending does not deliver pure hydrogen gas quality, a prerequisite for most hydrogen end-users ([energy intensive industry](#)) and also [does not contribute significantly to greenhouse gas emissions reductions](#). Blending is also not aligned with the energy efficiency first principle as it represents a dilution of a scarce, costly gas - hydrogen - with large amounts of methane, making it useless for certain industries while replacing only very limited amounts of fossil gas in the blend.

Caution is also required concerning the use of current gas infrastructure and the overall need for hydrogen pipelines. A recent [ACER report](#) found that “repurposing to hydrogen may be conditional on (i) the presence of parallel lines in fossil gas pipeline systems, so that at least one line could be repurposed to pure hydrogen, (ii) ensuring security of fossil gas supply to consumers during the conversion phase to pure hydrogen, (iii) hydrogen market uptake in the area serving a pure hydrogen corridor”. However, it also concludes that it is uncertain when and where these conditions for repurposing would be met across Europe, and whether they will be met at all.

Improving governance by removing institutional power from gas grid operators and increasing transparency

Transmission system operators (TSOs) were granted significant powers in 2009 when ENTSO-G was established and given important tasks, including the development of the Ten-Year Network Development Plan (TYNDP) and writing the first draft of network codes. Given the need to move towards a fully renewable, energy-efficient and integrated energy system, the historic role of ENTSO-G in promoting fossil gas infrastructure has become inappropriate. This body should be removed from such a central role, leaving space for a **strengthened governance, underpinned by independent oversight**. Furthermore, leaving TSOs in charge of the planning of new and repurposed hydrogen infrastructures would also run the risk of having the same subjects defining the pace and costs of the transition from one gas to another, where applicable.

The current system of infrastructure planning should be improved on the basis of a fully independent, transparent system-integrated process that allows for clear and realistic identification of investment needs and climate risks, accommodating a pathway to a fully renewable energy system by 2040. Therefore, **fossil gas TSOs’ but also Distribution System Operators (DSOs) roles should be reconsidered and downsized**, while further data transparency obligations should be placed on them so that more information on their activities becomes available. This should facilitate a high level of transparency and independent scrutiny of gas networks operations. These processes must be informed by public consultations and stakeholder involvement from the start, with safeguards ensuring feedback has duly been taken into account, substantiating when this is not done.

Regulatory solutions to these issues will depend on a robust, independent, science-based forecast of both fossil and renewable gas usage. The European Scientific Advisory Body on Climate Change, established under the European Climate Law, should play a role in objective and transparent energy system planning and modelling under the Gas Market Reform.

A European Network of Network Operators for Hydrogen (ENNOH)

The suggested establishment of an ENNOH risks further concentrating power in the hands of the fossil gas industry. To this end, while we acknowledge the limited need for new hydrogen infrastructure and the potential benefits of repurposing parts of the existing fossil gas infrastructure to cater for the transport of 100% renewable hydrogen, we believe that the ownership of assets being repurposed should no longer remain in the hands of incumbent fossil gas asset operators on transmission and distribution level (TSOs and DSOs).

Consumers should not bear the costs of expensive and untargeted hydrogen use

The Gas Market Reform should give consumers transparent information on costs but also on the greenhouse gas balance of the energy carrier used (gas vs electricity). Burning (fossil-based) hydrogen in boilers will remain less energy efficient, more costly in terms of money and more polluting in terms of greenhouse gas emissions than using renewables-based electricity. Also, the continued use and expansion of the gas network (DSO and TSO level) while gas demand is projected to decline, will only increase costs for consumers, particularly customers in or at risk of energy poverty.

A recent [study from the International Council on Clean Transportation](#) (ICCT) that compares the cost of several residential heating technologies in the year 2050 (including hydrogen boilers, hydrogen fuel cells with an auxiliary hydrogen boiler for cold spells, air-source heat pumps using renewable electricity, and heat pumps with an auxiliary hydrogen boiler for cold spells) found that air-source heat pumps are the most cost-effective residential heating technology in 2050 and are at least 50% lower cost than the hydrogen-only technologies.

No room for greenwashing

The Gas Market Reform should address greenwashing of fossil gases, an increasingly common activity by gas companies that harms consumers and the environment. This starts with the name of the molecule. So-called “natural gas” is mainly methane (CH₄), and is primarily of fossil origin. The current legal term does not reflect the fossil nature of the molecule and is strongly misleading. We call on the Commission to adopt the term “fossil gas” instead of “natural gas”.

Definitions of ***different types of “low carbon” gases*** should be very explicit and allow a distinction between hydrogen produced from renewables and hydrogen produced from fossil gas with or without carbon capture storage (so-called “fossil-based hydrogen with carbon capture” and “fossil-based hydrogen”) or produced from nuclear power (“nuclear-based hydrogen” or “non-renewable hydrogen”). The Gas Market Reform should propose an ***ambitious threshold, of at least 80% greenhouse gas reduction relative to the fossil fuel comparator, to define “low carbon” gases*** so as to exclude the most unsustainable production routes.

Certification schemes such as “***Guarantees of Origin***” or “***mass balance systems***” should exclude any “low carbon” gases (those produced from fossil fuels or nuclear), and should also take into account powerful methane emissions occurring across the entire fossil gas supply chain, mainly upstream. International Guarantees of Origin should be avoided as this would not give any incentive for renewable hydrogen production in Europe to be fully renewable.

Regulatory and financial support should only be granted to hydrogen produced from 100% additional renewable electricity. The Gas Market Reform should include strict provisions protecting consumers from greenwashing and ensuring that consumers have access to transparent, correct information on the environmental profile of the gases they consume or are offered on the market.

Biogas and biomethane from dedicated crops to be excluded from climate policies

Biogas and biomethane produced from dedicated crops should be excluded from any climate policies as pointed out by a recent [ICCT study](#) and CAN Europe's [position](#) on fossil gas. This is because of the significant greenhouse gas emissions emerging from direct and indirect land-use change associated with crop growing, which fails to meet decarbonization goals. Instead, only waste and residues with no alternative use (biomethane from wastewater sludge, as well as from landfill gas, with the caveat that the organic fraction of waste should be decreased) should be used to produce biogas/biomethane. Even though sequential crops might under certain circumstances be a valuable feedstock for biogas/biomethane production, one has to be wary of overoptimistic scenarios and support schemes where biogas production becomes the driver of unsustainable farming practices.

Lastly, biogas/biomethane should not be used through blending as an alibi to support the use of fossil gas any longer than absolutely necessary. Its use should be limited to hard-to-abate sectors and dedicated local distribution grids for energy communities or district heating.