

MITECO consultation on Spanish renewable hydrogen strategy



EFET response – 11 September 2020

The European Federation of Energy Traders (EFET*) welcomes the opportunity to provide our comments on MITECO's consultation on the Spanish renewable hydrogen strategy.

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 hydrogen is well-placed to help address. It can also contribute to the necessary decarbonisation of the gas system.

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 and only in the long term when proved to be needed and cost-efficient, there might be dedicated hydrogen grids, but in the interim, opportunities may exist for hydrogen installations close to industrial sites, and use in heavy transport applications where electrification is not efficient. EU and national support from Member States to kick-start the hydrogen market, and to ensure that hydrogen is not disadvantaged against other technologies through the design of support schemes will help to achieve a more efficient decarbonisation strategy.

In order to achieve a cost-effective decarbonisation of the Spanish economy, EFET believes that it should be underpinned by the following policy priorities¹:

1. Setting ambitious long-term objectives for renewable hydrogen coordinated with European goals. Hydrogen should be used as a tool to decarbonize the economy and to meet the European objectives, so it is important to set a certificate system to check the green origin of hydrogen. Support schemes can be implemented only if it is foreseen that market-based instruments are not enough to meet the objectives. Criteria of fair transition may be considered to grant aids.
2. Building upon the EU ETS in the short term, as it currently applies to power generation and heavy industries, then expanding it to become a long-term driver for decarbonisation across the national economy.
3. Hydrogen use should start by substituting grey hydrogen in industry and utilise natural gas where electrification is difficult or impossible (i.e. heavy transport). A green taxation system of fuels (based on CO₂ production) may be placed gradually in order to progressively increase the interest of investors and industries in using hydrogen.

¹ See also [EFET comments on the Roadmap for an EU Hydrogen Strategy](#)

* The European Federation of Energy Traders (EFET) promotes and facilitates European energy trading in open, transparent and liquid wholesale markets, unhindered by national borders or other undue obstacles. We build trust in power and gas markets across Europe, so that they may underpin a sustainable and secure energy supply and enable the transition to a carbon neutral economy. EFET currently represents more than 100 energy trading companies, active in over 27 European countries. For more information: www.efet.org

4. The construction of new networks to transport hydrogen or the investment in renovating old networks, boilers or heaters should be preceded by a cost-benefit analysis in order to avoid stranded costs. Otherwise, electrolyzers should be located near consumption centres or transportation hubs.
5. The regulation of gas and electricity systems should be adapted to facilitate the integration of electrolyzers, especially concerning access to grid and participation into the markets. The double charge should be avoided if hydrogen is used as a storage of energy. It is important to avoid unnecessary over costs to customers and avoid penalizing the market price of gas or electricity.
6. Utilising market-based mechanisms and adapting market instruments whenever financial support for new, low carbon energy sources is considered, while respecting sectoral unbundling rules.
7. 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
8. 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, without cross-subsidisation and removing the existing bias against electricity.

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 facilitate the production of renewable hydrogen. In turn, the existing legislative framework will need to be adapted and new legislation for hydrogen markets and infrastructure be introduced.

We argue that these aspects should be reassessed with the policy priorities listed above.

We understand that in the first (2020-2024) and second phase (2025-2030) of the Spanish hydrogen strategy there will be limited utilisation of market-based mechanisms. Only in the third phase (2030-2050) we see a greater shift towards market investments and sector integration. We consider that TSOs should have a limited role and that market participants should be able to invest where demand is located.

Below you will find our comments on the proposed regulatory interventions that are underpinned by the aforementioned objectives:

Measure 4

We fully support the Ministry measure to establish a Guarantees of Origin (GoOs) for hydrogen.

In the drive to integration of power and gas systems with decarbonisation in mind, it will be increasingly important to distinguish between the carbon footprints of various energy sources².

But what of low carbon sources not deemed to be renewable? Short of giving energy produced from them an advantage through expansion of the ETS into new end use sectors, there are two main market-based methods to bring them a benefit:

² See also [A future EU strategy on energy system integration? - EFET](#)

1. The establishment of a voluntary market in low carbon certificates, whereby customers, in addition to or in parallel with buying energy, purchase a certificate from a supplier which guarantees derivation from a zero or low carbon production source;
2. The introduction at EU level or by national governments of targets for carbon abatement in sectors outside the EU ETS currently, pursuant to which they then require suppliers of energy to meet low carbon quotas and set up a certification scheme for the fulfilment of those quotas.

Any GoOS support scheme should also address double-accounting issues.

Measure 7

We agree with the Ministry that it should evaluate the hydrogen targets for the period 2025-2030 with the objectives set in the European hydrogen strategy.

Measure 8

We argue that financial instruments to help the Spanish industry to convert its processes and infrastructure should be market-based.

Measure 27-28-29-30

We appreciate the Ministry intentions to create a legal framework for Power to Hydrogen (PtH) and Power to Gas (PtG) and electrolysers and how they will participate on the balancing market. Such framework should be coordinated with the European electricity and gas Network Codes (NCs).

A comprehensive policy framework for energy system integration should include further measures to level the playing field between the gas and power systems. This is a crucial prerequisite to allow the correct price signals to emerge and to drive consumer and producer investment decisions. Some such measures would entail adjustments to the degree and incidence of cost recovery by transmission operators.

At present, the costs, tariffs and charges faced by market participants (for example, connection charges, grid tariffs and imbalance charges), and the revenue streams they can earn (for example ancillary service revenues), often do not reflect the wider costs and benefits their actions have on the energy system. Additionally, electricity consumers bear a disproportionate share of levies and energy policy costs. The consequences of this situation may be exacerbated by the roll out of solutions designed to contribute to Europe's decarbonisation objectives (not least, in hard-to-abate sectors) and which provide the additional benefit of facilitating the integration of power and gas systems. For example, this applies to PtX installations and their potential impacts on future network reinforcement costs and balancing costs across the electricity and gas grids.

In order to ensure that the developers of projects aimed at fostering links between power and gas sectors (e.g. low carbon gas production facilities and PtX installations) face the right whole system price signals (i.e. in the form of connection charges, grid tariffs, congestion pricing ancillary service revenues and/ or imbalance charges), a number of policy measures and further reforms are required at both EU and national level, that is:

- A) Ensuring the value of all types of flexible assets in the gas system used for the purpose of congestion management and system balancing by TSOs and DSOs is signalled correctly;
- B) Ensuring that asset owners in the electricity system, which are subject to curtailment or redispatch measures, are compensated in such a way that they are left financially indifferent, taking account of opportunity costs as well as actually incurred costs;
- C) Implementing changes to grid tariffs across electricity and gas to better ensure they reflect the costs imposed by participants;
- D) Avoiding the adverse consequences of recovering sunk network costs and renewable and low carbon energy support costs - cost recovery should not lead to inefficiencies in the energy system and market distortions (e.g. through creating incentives for charge avoidance, or through disincentivising uptake of renewable or decarbonised gas technologies requiring them to bear the legacy costs of past investment in the gas grid);

An efficient energy market delivers the right mix of flexible capacity – production, demand and storage. The operation of the market in this respect should be free of regulatory interventions, so as not to prevent prices from reflecting the true value of any capacity scarcity in the system. Access to and use of storage facilities should remain commercially driven.

The flexibility services provided by all types of energy carriers and technologies (including P2X), must therefore be procured on the market and delivered by market players following a competitive, open, fair, and transparent tendering process. This market-based approach will deliver optimisation of the overall system cost and maximise social welfare.

Regulated system operators should maintain their role of neutral market facilitators and similar principles should be extended to new services and technologies such as P2X. The construction, ownership and operation of P2X installations should therefore be provided by the market to ensure optimal use of such assets.

Measure 44

We support the decision to update the Spanish hydrogen strategy every three years, in coordination with the European strategies in order to better evaluate different technologies.

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 Spanish NECP goals.

We therefore believe that the principle of technological neutrality should be featured as part of the overall policy approach. Furthermore, we reiterate the need for ensuring a level-playing field for technology developers and a framework that recognises the environmental benefit of a wide range of available technologies and rewards carbon abatement in a market based, technology neutral way.

Measure 45

EFET has long been a stakeholder actively promoting the development of liquid and efficient gas markets in the Iberian region, advocating for the integration of Portugal to the single

market. We support the coordination with Spain and at European level through the Connecting Europe Facility (CEF) and the participation of the Iberian institutions and stakeholders in all European forums.

There should also be a coordination among the different planning instruments at national level (i.e. NECP, network plans, different national strategies) and among the different member states of EU.

The EU hydrogen strategy 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.

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 carried out by Frontier Economics for EFET³. 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.

Measure 54-55

R&D could focus on hydrogen storage or encouraging industrial gas consumers to shift their consumption to hydrogen. This policy approach could better include technology neutrality and efficiency for the Spanish R&D sector.

Annex I – Financial mechanisms

We understand that most of the funds will come from European resources.

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.

³ See [Gas decarbonisation and sector coupling: ensuring a market-based approach. Frontier Economics' report for EFET](#)

- 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.

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 where it is needed.