

part of eex group



COMMENTS ON THE ITALIAN H2 STRATEGY

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1. CONTEXT

EEX would like to thank for the opportunity to express views on the proposal for an Italian Hydrogen Strategy. We welcome very much that the Italian government sees the Italian hydrogen economy embedded in a broad European context.

EEX has provided transparent exchange platforms for energy carriers such as power and natural gas, EUA-certificates under the European Emission Trading System (ETS) and further commodities for more than twenty years. Building upon this rich experience, **EEX is committed to support the upscale of the Italian and the European hydrogen economy from the beginning**. Hydrogen trading markets, markets for hydrogen guarantees of origin (GOs) and further adjacent markets can facilitate the ramp-up process through providing transparency on prices and volumes, offering innovative solutions to make hydrogen accessible to a broad field of consumers and through connecting hydrogen to further energy markets such as power, gas and others.

To kick-start the process already now, EEX established a **Hydrogen working group** with around 50 companies being keen to develop trading markets for hydrogen.

In the statements below we elaborate on our thinking how trading markets can help to reach the goals of the Italian hydrogen strategy. Then, we outline on our thought of necessary conditions for hydrogen trading markets to develop.

About EEX

EEX is the leading energy exchange in Europe which develops, operates and connects secure, liquid and transparent markets for energy and related products. As part of EEX Group, a group of companies serving international commodity markets, EEX offers contracts on Power, Natural Gas and Emission Allowances as well as Freight and Agricultural Products. EEX also provides registry services for White Certificates, Capacity Certificates and Guarantees of Origin (GOs) on behalf of the French State, as well as Auctions for GOs. EEX Group provides further services to GO-registries via Grexel. EEX is the largest electricity exchange, the second largest CO₂ exchange and third largest natural gas exchange in the world.

2. HOW DO TRADING MARKETS SUPPORT THE ITALIAN HYDROGEN STRATEGY?

I. Hydrogen markets

The Italian Hydrogen Strategy foresees the realization of a mature hydrogen market by 2030. In line also with the EU-Hydrogen Strategy, hydrogen will have become a tradable asset just like power or natural gas then.

Before that, and starting soon, trading can be organized on a more granular basis (**valleys**) and/or through virtual hubs and supporting the ramp-up of hydrogen markets: **Transparent trading markets**, spot and derivatives, help to allow non-discriminatory access to hydrogen to a diverse field of potential hydrogen consumers and connect them to producers. They provide transparent price and trading volume information and as such allow for assessing the level of achievement reached within an upscaling Italian and European hydrogen economy respectively.

While spot markets ensure security of supply, hydrogen derivatives enable hydrogen market participants to secure a fixed price level for a certain time period already several calendar months, quarters or years earlier and by thus also providing for investment security.

EEX is willing to provide **multilateral hydrogen trading platforms**, both spot and derivatives, connected with physical and financial settlement plus counterparty risk management adding to the market's transparency and ensuring non-discriminatory access to hydrogen for small and big producers and consumers respectively. To kick-start the process and to discuss market design and development options, EEX established the **EEX-Hydrogen working group** with around 50 companies being keen to develop trading markets for hydrogen.

II. Hydrogen-GO-markets

On GO-markets, the green attribute of energy carriers becomes transferable between sectors and gets a market-based price tag – contributing to the hydrogen producers' revenues. The existing Italian and European gas transport infrastructure is well developed and interconnected. Through that, and with relatively small investment, regions with beneficial production conditions for green hydrogen will be connected to consumption centers. EEX believes trading physical hydrogen and separately hydrogen GO-markets is best suited to establish liquid markets for both, being part of European markets. Hydrogen-GOs are already there: **Grexel**, part of EEX Group, is one of the consortium partners to **CertifHy**, Europe's first registry for hydrogen GOs. In the frame of the EEX-Hydrogen working group members will also investigate design options for hydrogen-GOs – or further certificates should that be relevant.

III. Sector Coupling

Green hydrogen production is sector coupling in practice. The coupling of the electricity and gas sectors could be a decisive factor for the speed and success of the energy transition and reaching significant amounts of green hydrogen. It offers the possibility to release further system and grid flexibility and to put infrastructure and resources to their best use. With undistorted market prices as connecting links, the production and use of green hydrogen, the operation of transport, heating and other sectors is being orchestrated through power, gas, emission and GO-markets.

3. CONDITIONS FOR DEVELOPING A MARKET-BASED EUROPEAN HYDROGEN ECONOMY

1. **Production of hydrogen should take place centrally** where conditions are favorable, the hydrogen shall then be **transported** to consumers through grids or other adequate transport systems. On-site production not only hampers the creation of transparent hydrogen markets, but also hinders the access to the hydrogen for consumers.
2. Transparent hydrogen trading markets develop only on the condition of non-discriminatory access to the hydrogen grid - or the natural gas grid in case of blending. **A strong and reliable regulatory framework e.g. comparable to the natural gas market regulation is necessary for hydrogen.**

Within the development of hydrogen transport infrastructure, EEX sees the following steps:

- i) As a first step, integrating hydrogen into the natural gas network helps distributing hydrogen easily to end consumers. However, physical blending is subject to technical limitations on level of the actual transport pipes as well as on level of the actual consumption of gas, virtual blending or blending on specific grid levels could be an alternative. Another option is to differentiate between DSO and TSO level – dependent on consumers connected to the grid, blending can be difficult on one level but is a viable option on another. This needs to be discussed thoroughly with market participants from the whole value chain.
 - ii) A separate pure hydrogen infrastructure is not just an alternative to blending, but both options should complement each other where useful. When building up a hydrogen network on a larger scale it is probably not necessary to build completely new pipelines in most cases, rather it is possible to benefit from existing gas infrastructure.
 - iii) Regulation of hydrogen transport should be clear and firm – but also dynamic. Over the development of this entirely new market for hydrogen, adjustments might become necessary.
 - iv) Market-based balancing on hydrogen trading markets helps to establish liquid trading markets right from the beginning. TSOs are still responsible for ensuring the grid stability, however, by covering their need for balancing energy on transparent trading markets this will be done at least possible costs.
3. **EEX prefers market-based support schemes** allowing for the development of transparent and trustworthy hydrogen prices reflective of the physical reality of the market. Support schemes should not influence the trading behavior of hydrogen traders, e.g., investment support or tradable quota connected to tradable certificates are helpful support schemes.
 4. A low and **non-distorting level of taxes and levies** for electrolysers and on retail level helps low-carbon hydrogen to become competitive. Levies, taxes and tariffs should be regarded in a cross-sector approach as part of an overall sector coupling strategy to avoid creating unnecessary barriers to an integrated energy system.
 5. EEX asks the Italian government to work towards an **integrated European network planning** between power, natural gas and hydrogen grids. This helps to reach liquid low-carbon hydrogen market free of ruptures. Overcoming the barriers between power, natural gas and hydrogen grids is necessary to couple sectors.
 6. **Hydrogen commodity and GO-trading need to be organized separately** from each other to allow for liquid markets for both to develop.
 7. There is a need for **EU-wide standards - or even better global standards - for hydrogen GOs**. Adequate technical prerequisites for international exchange and mutual acceptance allow

for European or even global hydrogen GO-markets to develop. GOs will provide for a significant market-based revenue source to operators of electrolyzers and producers of low-carbon hydrogen, and by that, contribute to the transition on a market-basis.

8. Harmonized standards are key for European hydrogen commodity markets to develop. Therefore, we welcome very much that the Italian government defines the same stepstones as the EU-hydrogen strategy or other member states.

- i) From the perspective of EEX, harmonized standards and quotas for blending are necessary to allow cross-border trade to evolve. Balancing conditions for hydrogen grids need to be the same across Europe. This holds true for balancing agreements and balancing periods – and hydrogen should be balanced and traded in EUR/MWh – also to link hydrogen to power and other gas markets.
- ii) Responsibilities on level of a market area manager or TSO of hydrogen grids need to be clearly cut and unambiguously.
- iii) Harmonized feed-in standards and a clear taxonomy regarding the different low-carbon hydrogen production methods are necessary.

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