

ACER-CEER “European Green Deal” Regulatory White Papers

White Paper	What’s in it?
<p>1. When and How to Regulate Hydrogen Networks?</p>	<p>This Hydrogen White Paper examines:</p> <ul style="list-style-type: none"> • When regulating hydrogen networks is needed • How to treat existing hydrogen network infrastructure • How to address regulatory challenges related to the repurposing of gas infrastructure for dedicated hydrogen transport <p>It has 6 recommendations on regulating hydrogen networks:</p> <ol style="list-style-type: none"> 1. Consider a gradual approach to the regulation of hydrogen networks in line with market and infrastructure development for hydrogen 2. Apply a dynamic regulatory approach based on periodic market analysis and monitoring 3. Clarify the regulatory principles from the outset 4. Foresee temporary regulatory exemptions for existing and new hydrogen infrastructure developed as business-to-business networks 5. Value the benefits of repurposing gas assets for hydrogen transport 6. Apply cost-reflectivity to avoid cross-subsidisation between the gas and hydrogen networks in case of repurposing gas assets <p>Context:</p> <ul style="list-style-type: none"> • With Europe planning to invest heavily in clean hydrogen, regulators are considering what regulatory framework is needed to optimise the massive public investment. • Currently, there is little hydrogen infrastructure development, and what exists is not covered by the EU regulatory framework. • The Commission’s EU Hydrogen Strategy (July 2020) provides a roadmap for hydrogen installations and its production must become fully decarbonised (i.e. clean hydrogen produced using renewable electricity). • On 11 December 2020, the Council’s conclusions entitled “Towards a hydrogen market for Europe” called on the Commission to further elaborate and operationalise the EU hydrogen strategy. • On 19th November 2020, the European Parliament’s ITRE committee rapporteur, (MEP Jen Geier) published his draft own-initiative report on hydrogen strategy for Europe. Following amendments, the ITRE Committee will vote on the report in March 2021. • The European Commission’s Hydrogen Strategy recognises that large-scale deployment of clean hydrogen is conditional on the availability of energy infrastructure for connecting supply and demand.

	<ul style="list-style-type: none"> • Existing gas networks could be “repurposed” to handle bio methane, blends of hydrogen and natural gas, or pure hydrogen. (see ACER’s survey below). • The energy transition requires major public and private sector investment. The European Commission took an important first step in the proposed revision of the TEN-E Regulation by including hydrogen transmission infrastructure (new and repurposed), storage and cross-border electrolyser facilities within its scope - a step that is very much welcomed by ACER. <p>What else is ACER doing on hydrogen?</p> <ul style="list-style-type: none"> • ACER sees hydrogen or power-to-gas fuels (alongside electrification) as key enabler for multiple applications in a decarbonised energy system. ACER’s webinars contribute to the debate. • ACER’s insights and expertise help shape the future hydrogen network regulation and market design rules. • ACER survey on whether and to what extent the national gas networks can be repurposed to transport bio-methane and hydrogen blends. • ACER commissioned background papers on hydrogen and on methane.
<p>2. Regulatory Treatment of Power-to-Gas</p>	<p>This White Paper sees that Power-to-Gas should be :</p> <ul style="list-style-type: none"> • market-based activities (open to competition) with system operators allowed to develop and operate power-to-gas installations only in exceptional cases • included in network panning <p>It has 7 recommendations on the regulatory treatment of Power-to-Gas:</p> <ul style="list-style-type: none"> • Revisit the current set of definitions for major activities in the context of integrated gas and electricity sectors • Consider investment and management of power-to-gas installations as market-based activities which are open to competition among market players • Allow involvement of system operators in the development and operation of power-to-gas installations only in exceptional cases • Include power-to-gas installations and their suitable locations in system needs analysis • Define cost-reflective network tariffs, which should be applied to comparable activities across the electricity and gas sectors in a technologically-neutral way • Avoid distortive effects of taxes and levies on the integrated energy system • Ensure traceability of renewable energy throughout the integrated energy system.

Context:

- Currently the links in the energy sector between energy carriers (electricity, gas, heat) and between them and the consuming sectors (industry, buildings, transports) are limited. The **market** and **regulatory rules are designed separately**.
- Decarbonisation of the energy system requires an increasing level of “sector integration” between its various components (e.g. electricity, gas, heating) to optimises the energy system as a whole rather than separately.
- Most energy conversion technologies for sector integration (e.g. combined generation of heat and power (CHP), pumps, Power-to-Heat (P2h), Power-to-Gas (P2G), etc.) have not yet reached an efficient scale.
- ACER’s view is that all technologies must be guaranteed a **level playing field**, so they can compete on the merits.
- The European Commission’s Hydrogen Strategy provides a roadmap for a fast and large-scale deployment of clean hydrogen to help fully decarbonise the economy but this is conditional on the availability of energy infrastructure for connecting supply and demand.
- Existing gas networks could be “repurposed” to handle bio methane, blends of hydrogen and natural gas, or pure hydrogen.
- The European Commission took an important first step in the proposed revision of the TEN-E Regulation by including hydrogen transmission infrastructure (new and repurposed), storage and cross-border electrolyser facilities within its scope - a step very much welcomed by ACER/CEER.

What else is ACER doing on power-to-gas and system integration?

- ACER sees sector-integration and vitally important and hydrogen or power-to-gas fuels (alongside electrification) as key enablers of a decarbonised energy system.
- See the Energy System Integration part of the ACER website for info on [Market Based Mechanisms](#), and [Energy System Integration - Technologies](#).
- ACER also commissioned background papers on [hydrogen](#) and on [methane](#).