

**Legal challenges at the end of the fossil fuel era:  
Shaping energy futures through legal intervention**

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**PANEL 1. Diagnosis of the current energy crisis**

**The role of hydrogen for a sustainable energy transition in the European Union: Between a gas-based and a renewable path**

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In the context of climate emergence and the Anthropocene, a new wave of interest in hydrogen as an energy carrier has emerged over the last few years. In this sense, the European Green Deal, Energy System Integration Strategy, and the Hydrogen Strategy identified hydrogen as a priority area for a clean and circular economy. Furthermore, the deployment of hydrogen has the potential to increase security of supply, mitigate price volatility and boost the flexibility and resilience of the energy system (IRENA, 2022). In addition, it will help to reduce the dependence on imported gas, as it considers the Versailles declaration and the REPowerEU Communication presented by the Commission in March 2022. The European Climate Law established a 55% emissions reduction target for 2030 and a binding objective of climate neutrality by 2050. This means that planning for methane gas and hydrogen, and regulation of these gases, must consider the declining role of fossil gas and the need to decarbonise the energy system. The main purpose of this communication is to assess whether the European Union is approaching the planning and regulation around hydrogen with a view to reducing gas dependence, while properly integrating sustainability considerations and enhancing the coherence with climate planification and regulation. With this aim, this communication will firstly analyse what are the main strategies and regulatory proposals related to hydrogen in the European Union and what is the role of hydrogen that they envisage, and the main measures that they include related to the sustainability of the energy system. Secondly, it will be assessed to which extent these policies and the existing and proposed regulation framework prompt fossil fuel-based hydrogen in the European Union. Finally, it will identify what are the main legal sustainability issues which arise from the deployment of hydrogen in the European Union.