

OPEN LETTER: EUROPE MUST EXPLORE THE NATURAL HYDROGEN OPPORTUNITY

Brussels, 28 October 2026

To: Commission President von der Leyen; Executive Vice-Presidents Ribera and Séjourné; Commissioners Jørgensen, Hoekstra, Zaharieva and Roswall

CC: Heads of State or Government; European Council President Costa

Europe's reliance on imported fossil fuels is a strategic vulnerability and a direct constraint on **energy sovereignty**: Europe's ability to power its economy without depending on decisions or conflicts beyond its control. In 2024, net imports met [57% of the EU's energy needs](#). In 2025, the EU imported around [€340 billion](#) worth of fossil fuels; the 2026 price shock added a further [€62 billion](#) between March and the end of July. At the same time, Europe must decarbonise its economy, restore industrial competitiveness and supply affordable clean molecules to sectors that cannot rely on direct electrification alone. Meeting these objectives requires Europe to develop every credible domestic low-carbon energy source.

Natural hydrogen offers a unique and potentially game-changing domestic low-carbon energy source and a European industrial opportunity. Unlike hydrogen produced from electricity or fossil fuels, it is generated by geological processes and can accumulate in underground reservoirs. If recovered safely, economically and at scale, it would not merely be another production pathway for an energy carrier; it would be a new primary energy source. Turning it into specification-grade, market-ready hydrogen requires separation, purification and conditioning, capabilities in which Europe already has strong industrial expertise. The opportunity is therefore industrial as well as geological, spanning technology, equipment, services, certification and skilled jobs. Natural hydrogen could complement, rather than displace, renewable and other low-carbon hydrogen, broadening Europe's options while reducing pressure on power systems and imports.

Natural hydrogen exists, but its commercial potential remains unproven. [Global modelling by the US Geological Survey](#) indicates that the subsurface resource could be very large, although most is likely to be impractical to recover. In Europe, [research in Lorraine](#) and indications elsewhere have raised the prospect of material accumulations. Key uncertainties remain regarding reservoir productivity, recharge dynamics and commercial recoverability. **Those uncertainties are the case for exploring, not for waiting.**

The potential economic prize is substantial. At an illustrative valuation, 100 million tons of recoverable natural hydrogen would represent approximately €100-200 billion in gross resource value. Capturing that opportunity would support a wider European industrial value chain in geoscience, drilling, subsurface monitoring, separation, purification, conditioning and transport, while repurposing capabilities, infrastructure and jobs from Europe's oil, gas and mining sectors. Where present, strategic co-products such as helium could add further value.

The potential climate benefit is also sizeable. EU rules require low-carbon hydrogen to achieve at least a [70% greenhouse gas emissions saving](#) relative to unabated fossil fuels. If the illustrative 100 million tonnes met that standard and displaced fossil-based hydrogen, it could avoid approximately 790 million tonnes of CO₂-equivalent emissions. Hydrogen meeting a stringent lifecycle standard could reduce emissions in refining, fertilisers and chemicals, and support the decarbonisation of steel, industrial heat and synthetic fuels.

The Commission has begun to recognise the opportunity. The [€2 million EU-funded H2-QUEST project](#), launched in 2026, is a welcome first step towards assessing Europe's natural hydrogen potential. In parallel, DG GROW has commissioned a 12-month pilot project to deliver the first Europe-wide assessment of natural hydrogen potential and develop recommendations for the regulatory framework needed for its sustainable production. These initiatives are important first steps, but research and mapping alone will not create an investable exploration market. Europe still lacks a coherent framework for recognising the resource, accessing public subsurface data, sharing the risk of test wells, and treating natural hydrogen explicitly in certification and support rules.

Global competitors are moving faster. The [US Department of Energy committed \\$20 million to 16 projects](#), while the [US Geological Survey published national assessment tools](#). Australia is combining [state licensing](#) with [federal geological assessment](#). [Brazil's 2024 hydrogen law recognises geological hydrogen as renewable and empowers its regulator to regulate exploration and production](#); the [Philippines has designated two areas and published a native-hydrogen service-contract process](#); and [Saskatchewan, Canada, held its first Crown offering for helium and associated gases, explicitly including natural hydrogen, awarding 15 six-year permits across more than 267,000 hectares](#). Europe risks doing the science while others capture the technology, capital and jobs.

We urgently call on the European Commission to name natural hydrogen explicitly in the 2026 Energy Union package and the forthcoming revision of the EU Hydrogen Strategy, and to launch a high-profile European Natural Hydrogen Initiative: a development, demonstration, investment and market-enabling programme to determine the scale of the resource and build the industrial value chain needed to bring specification-grade hydrogen to market.

Europe does not lack scientific or industrial capability. It has world-class geoscience, energy-services companies, equipment suppliers and gas-processing expertise. The obstacles are political and institutional: legal uncertainty, fragmented data, early-stage risk that private investors cannot bear alone, and a hydrogen framework that does not yet clearly recognise this pathway.

The Commission should act on four priorities:

- **Make the EU hydrogen framework genuinely technology-neutral by basing eligibility on lifecycle performance, and recognise natural hydrogen in the forthcoming EU Hydrogen Strategy.** Clarify that natural hydrogen can qualify for certification and support when a robust project-level lifecycle assessment demonstrates compliance with the [EU's 70% greenhouse gas emissions saving threshold](#). Definitions, certification rules and funding eligibility should judge performance rather than exclude a pathway in advance, while accounting for emissions from extraction, separation, purification and conditioning. This would complement, not weaken, Europe's priority for renewable hydrogen.
- **Mobilise a €1 billion exploration and first-of-a-kind envelope**, designed to crowd in Member State and private investment. A dedicated EU facility or window should enable around 50 exploration and appraisal wells across at least 10 geographically diverse Member States, including the Baltic states and countries in eastern Europe, while supporting the full route to market: mapping and research; data access and environmental baselines; flow testing and pilot production; separation, purification and conditioning; enabling infrastructure; and industrial offtake. The envelope would equal less than 0.3% of Europe's 2025 fossil-fuel import bill, roughly one day of import spending, to test the potential for a major domestic low-carbon industry.

- **Facilitate clear, predictable and accelerated exploration permitting.** Building on the progress of pioneering Member States such as France, Spain, Germany and Poland, encourage streamlined, transparent and predictable permitting procedures for natural hydrogen exploration across Europe. Each Member State should establish and publish a clear timeline outlining the different stages of the exploration permitting process, including defined deadlines for administrative assessments and decisions, while actively working to shorten overall approval times. Lengthy and unpredictable procedures create significant financial uncertainty for companies already bearing substantial geological, technological and investment risks. Greater transparency, clear deadlines and faster permitting decisions are essential to unlock private investment and support the emergence of a competitive European natural hydrogen industry.
- **Unlock Europe's publicly funded subsurface data and build a natural hydrogen atlas.** Create a common framework for timely, affordable and standardised access to publicly funded seismic surveys, well logs, geological maps and geochemical data. Build on H2-QUEST to deliver a continent-wide prospectivity atlas and common data standards, reducing duplication and informing future public and private investment.

Europe needs the framework, the rules and the resources to find out. Moving now would give Europe the evidence to make sound decisions and, if the resource proves material, the opportunity to capture a new industrial value chain rather than cede another strategic energy opportunity to competitors.

We stand ready to work with the European Commission and Member States to design appropriate safeguards, mobilise investment, share data, and build the projects and technologies that could underpin a cleaner, more secure and more competitive European energy system.

Yours sincerely,

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