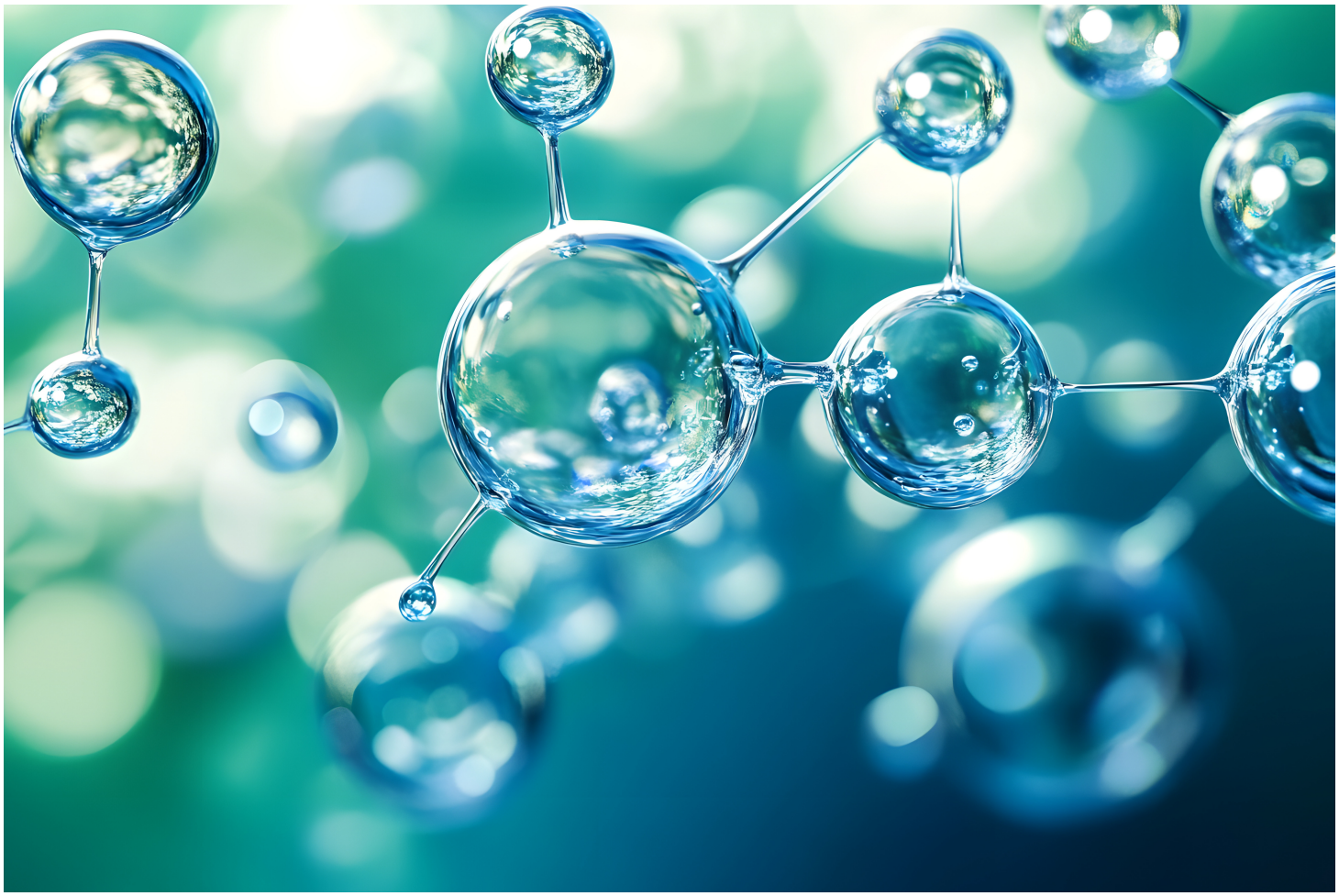

Written on 02 July 2025

3 minutes of reading

News

IFPEN

Hydrogen

**What is the potential of natural hydrogen—both in France and globally—and what challenges lie ahead? Commissioned by the Directorate General for Energy and Climate (DGEC) and coordinated by IFPEN, the strategic report on the potential of natural hydrogen has been submitted to the French Minister for Industry and Energy.**
**Objective: to provide public authorities with the arguments for responsible exploration, in**

**support of the energy transition and national sovereignty.**

>> Read the full report (in French)
>> Read th summary

In April 2024, the DGEC entrusted IFPEN to coordinate of a comprehensive study aimed at identifying high-potential areas for native hydrogen across French territory and assessing the current state of knowledge, as well as ongoing exploration and development efforts worldwide.

The report, titled “Potential of native hydrogen in France”, was developed by IFPEN’s teams in collaboration with around fifteen academic experts*, to address key questions about this resource, which stands out for its lower production costs and reduced environmental impact compared to manufactured hydrogen.

Their expertise highlights several major insights:
- Progress in understanding the geological mechanisms behind the formation of native hydrogen;
- A global overview of current initiatives, ongoing exploration projects, and deployed technologies;
- Identification of high-potential regions in France, including the Aquitaine Basin, the Pyrenean Piedmont, and the Lorraine coal basin;
- Considerations related to social acceptability and the environmental challenges of potential exploitation.

Finally, the report notes that, if proven technically and economically viable, the exploitation of native hydrogen could significantly enhance France’s energy independence.

* Contributors include experts from BRGM, CNRS–University of Lorraine, CNRS–University of Montpellier, ENSEGID–Bordeaux INP, the Institut de Physique du Globe, University of Grenoble, and University of Pau and the Adour Region (UPPA).

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