



Press Release | September 2024

45-8 ENERGY LAUNCHES WESTERN EUROPE'S FIRST HELIUM PILOT PRODUCTION

At a time when Western Europe relies entirely on imported helium, incurring significant energy, environmental and economic costs, 45-8 ENERGY is proud to inaugurate the first helium pilot production in Western Europe. This initiative, part of the “Fonts-Bouillants” project, is located in the Nièvre region (*France*).

Exploratory work carried out under the “Fonts-Bouillants” exploration license, granted in 2021 by the French Ministry of Industry, has confirmed the helium potential in the southwestern part of the Nièvre region. This led to the discovery of an initial shallow gas deposit (*less than 100m deep*) which will supply this pilot unit. The primary goal of this unit is to evaluate the technical and economic feasibility of long-term helium production in the area, while standing out in several key aspects:

- Innovative Approach:** The project incorporates a world-first technological innovation, developed in collaboration with the Reactions & Process Engineering Laboratory (CNRS – *University of Lorraine*) and patented in 2024. Known as PROMET-Hé (*Membrane Process for Helium Treatment*), this compact and energy-efficient process enables the effective and eco-friendly separation and purification of helium.
- Contribution to Sovereignty:** As the first production initiative in Western Europe, the project reduces reliance on imported helium – a critical resource for numerous industries.
- Eco-Responsible Approach:** The helium, extracted from shallow deposits, is locally produced and distributed through a short supply chain to meet the needs of French industry, significantly reducing the overall impact of its value chain.
- Showcase of French and European Expertise:** The Fonts-Bouillants project has engaged 194 partners and suppliers, 76% of whom are French and 98% from across Europe.

The inauguration of this pioneering unit took place on September 11, 2024, attended by local and national officials, as well as the partners who made this project possible. Following the ceremony, an open house was held on September 12, 2024, offering residents an opportunity to learn about the unit, its operations, challenges, and long-term goals.

Drone view of the 45-8 ENERGY pilot helium production unit



Inauguration of September 11, 2024



A STATE-SUPPORTED PROJECT

The French Government has supported this innovative and ambitious project from the outset through two major initiatives:

- Its selection by the French Ministry of Industry and Bpifrance as a laureate of the "Industrial Recovery Plan- Strategic Sectors", accompanied by a €1.6 million grant.
- Its designation as a "Greentech Innovation" project by the French Ministry of Ecological Transition, making "Fonts-Bouillants" the only subsurface project to receive this distinction since the label's creation in 2016.



WHY IS IT CALLED A PILOT UNIT?

The term "pilot unit" is used because it is smaller in size compared to a full industrial installation. Its purpose is to test the patent co-developed with the LRGP (*CNRS-Université de Lorraine*) on a pre-industrial scale, as well as to evaluate technologies still under development, much like a test bench. Additionally, it helps to validate the technical and economic feasibility of a long-term helium production project.

WHY HELIUM ?

Helium is a strategic, rare, and highly sought-after natural resource. In 2023, the European Union added it to the list of critical resources, and to the "CRM Act" in 2024. Its unique physicochemical properties render it essential for numerous industries, including medical, electronics, aerospace, and aeronautics. However, helium cannot be synthesized economically, and there are few viable substitutes for its various applications. Additionally, its supply in Western Europe relies entirely on long-distance imports, which are energy-intensive, costly, and involve complex logistics due to its volatility.

ABOUT 45-8 ENERGY

As pioneer in Europe, 45-8 ENERGY is a company dedicated to the exploration and production of eco-friendly, strategic gases with short supply chains: helium and natural hydrogen, as well as resources that may be associated with them.

45-8 ENERGY's ambition is to become the European leader in the helium and natural hydrogen sectors, based on three key pillars:

- The joint valorization of responsible resources in underexplored geological contexts.
- The extraction and distribution of resources to strategic local markets through production sites close to European consumers.
- The reduction of resource supply chains by eliminating costly steps with a high environmental impact.

45-8 ENERGY has established itself in the European helium and natural hydrogen market by securing several exploration and production licenses in France, Germany, and Kosovo.

Moreover, the company is involved in the emergence of a circular helium chain through its RECYCL'He technology, a mobile helium recycling unit.

The success and expansion of these activities are made possible by a multidisciplinary team of 33 experts. 45-8 ENERGY has also accelerated its growth through three funding rounds, raising a total of €31.5 million.



FOR MORE INFORMATION:

www.458energy.com

TO CONTACT US:

communication@458energy.com