



Press release | May 2020

## **45-8 ENERGY RAISES 1.3 MILLION EUROS TO PRODUCE AN ECO-RESPONSIBLE FRENCH HELIUM.**

45-8 ENERGY, the French company that explores the European subsurface in search of helium, has announced the raising of 1.3 million euros from private and public investors to pursue its ambition of producing local helium in a short circuit.

Helium has become a strategic resource, essential to many industries (medical, electronics, space, aeronautics, etc.). Aware of the crucial issues involved in helium supply, the founding partners, through the creation of 45-8 ENERGY in 2017, wanted to use their solid experience in subsurface exploration to meet, on an eco-responsible way, the demand for helium on the European market, which is entirely dependent on imports at great energy cost, in an ecologically responsible manner.

In collaboration with academic and industrial partners, 45-8 ENERGY is conducting, in parallel, several research and development projects aimed at developing effective efficient and adapted tools for the exploration and production of helium as well as for the development of its potential related resources.

### **A FIRST FUNDRAISING FOR A FIRST PRODUCTION PILOT**

With a first round of financing of 1.3 million euros, 45-8 ENERGY is pursuing its ambition to produce French helium in an eco-responsible way and in a short circuit by 2023.

This fundraising is being carried out with 14 European investors, both private and public, some of whom are particularly aware of geosciences issues.

45-8 ENERGY has filed its first exploration permit for an area of 251km<sup>2</sup> in the Nièvre region, which is still being examined by the relevant institutions. This round of financing will allow 45-8 ENERGY to complete the work on this permit, to accelerate the development of other exploration projects in France and Europe and to initiate the R&D projects necessary for the exploration and production of helium.



*45-8 ENERGY - Taking a near-surface gas sample during a field campaign.*

## **A FIRST PROJECT TO SUPPORT THE ECOLOGICAL TRANSITION**

45-8 ENERGY's ambition with this first pilot project is to capture and valorise a gas rich in helium and carbon dioxide that escapes naturally at the surface via thermo-mineral sources and a major geological fault in the area. Following an exploratory phase necessary for the precision of the potential reserves that the site can contain and deliver, 45-8 ENERGY wishes to quickly implement a production pilot demonstrating the technical and economic viability of such an eco-committed project.

This pioneering, innovative and eco-responsible approach acts in favour of the ecological transition:

- By limiting greenhouse gas emissions thanks to the valorisation of the carbon dioxide present in the gas stream and currently escaping into the atmosphere.
- By using the helium resource in a short circuit, thus considerably reducing the environmental impact of the sector.

## INCREASING THE NUMBER OF EUROPEAN EXPLORATION PROJECTS

45-8 ENERGY is pursuing its ambition to supply responsible helium in a short circuit to other Western European consumers.

To this end, several areas of interest in France and Europe have already been identified by the team's geologists. A new application for an exploration permit is being prepared for 2020. Others will follow!

## DEVELOPING ASSOCIATED R&D PROJECTS

Helium exploration being an innovative activity with many specificities, 45-8 ENERGY is conducting various Research & Development projects, in collaboration with academic and industrial partners:

- Gas sensors currently on the market being unreliable and unsuitable for field campaigns, 45-8 ENERGY, in partnership with the Lafayette Institute, Solexpert, the GeoRessources laboratory (UMR - University of Lorraine/CNRS), has developed an ultra-high performance gas sensor, based on a HEMT (High Electron Mobility Transistor) semiconductor technology. The sensor, initially designed to meet its own helium exploration needs, is of primary interest to companies in the Geosciences field and has recently been set up as a specific Business Unit within the company.
- Aware that the surface treatment aspect is just as fundamental as the subsurface geology issues, 45-8 ENERGY is currently setting up an R&D collaboration with the “Laboratoire Réactions et Génie des Procédés” (UMR - Université de Lorraine/CNRS) and MetaFensch, the objective of which is to develop new membranes allowing more efficient separation of the various gases compared to current commercial solutions.



**PRODUCE THE FIRST ECO-RESPONSIBLE WESTERN EUROPEAN HELIUM CYLINDER BY 2023.**

## WHY HELIUM?

Helium is a strategic, rare and highly sought-after natural resource. The European has added it to their list of critical resources. Its unique physical and chemical characteristics make it an indispensable resource for the medical, electronic, aeronautical and space industries. However, helium cannot be synthesised, has few effective substitutes and its supply in Western Europe is currently dependent on long-distance imports which are extremely energy-intensive, costly and logistically complex.

## ABOUT 45-8 ENERGY

The two co-founders of 45-8 ENERGY, Nicolas Pélissier et Benoît Hauville, aware of our planet's environmental challenges and keen to convert their geological expertise into an eco-committed action, started from a strong observation: 100% of helium consumed in Western Europe are imported from the United States, Qatar and Algeria, at great energy cost.

45-8 ENERGY was born out this alarming assessment. Located in France, the company is dedicated to the eco-friendly exploration and production of strategic industrial gases which are essential to the ecological and energy transition, such as helium and the co-valorisation of its associated resources. It focusses on short supply chains enabling human size local projects targeting a nearby consumption.

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**MORE INFORMATION**

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