



Press release | September 29, 2022

45-8 ENERGY JUST OBTAINED ITS 2ND HELIUM EXPLORATION LICENSE IN FRANCE, THE “AVANT-MONTS FRANC-COMTOIS” LICENSE

Following bibliographic research and encouraging preliminary field measurements, 45-8 ENERGY has identified a major prospective interest in helium, combined with non-combustible gases (nitrogen and carbonic gas), in the Avants-Monts of Jura area, in central-eastern France.

In order to confirm the exploratory potential in helium of the area, 45-8 ENERGY has submitted in April 2021 to the Ministry of the Ecological Transition the application for an Exploration License for helium and related resources, the “Avant-Monts Franc-Comtois” license. This licence has just been granted by the French State through a ministerial decree and published in the Official Journal (*JORF*) on August 5, 2022, for a 5-year period. It covers an area of 306 km² (118 mi²) on the western part of the Doubs departement.

A DECISIVE 1ST EXPLORATORY PHASE

In order to deepen geological knowledge of the area and confirm the helium concentration, an ambitious work program will be carried out. It will consist of data acquisition with portable equipment enabling the subsurface to be characterized without danger to both environment and local residents. It includes detailed geological mapping, taking soil gas samples (*at 1 m depth*) which will be then analysed in the laboratory, and geophysical measurements (*electrical, gravimetric, or magnetic tomography*), enabling indirect imaging of the subsurface. One or many shallow depth surveys will eventually complement this acquisition program if preliminary results are encouraging.

The extension of the requested license is at this stage necessarily broad to localize the most helium-prone areas, and then, as data is acquired, to target high-potential areas. The aim is to, if the production potential of these gases is confirmed, implement a compact production unit with a small footprint (*equivalent to a farm shed*) after obtaining a production concession.

A LICENCE LOCATED IN CENTRAL-EASTERN FRANCE

The exploration license covers 58 municipalities listed below. All of them are located in the Doubs, a French department in central-eastern France.

Audeux, Avanne-Aveney, Berthelange, Besançon, Beure, Bonnay, Braillans, Burgille, Busy, Chalezeule, Champagny, Champvans-les-Moulins, Châtillon-le-Duc, Chaucenne, Chemaudin et Vaux, Corcelles-Ferrières, Corcondray, Courchapon, Dannemarie-sur-Crète, Decevey, Ecole-Valentin, Etrabonne, Ferrières-les-Bois, Fontain, Franey, Franois, Geneuille, Grandfontaine, Jallerange, Lantenne-Vertière, Larnod, Lavernay, Le Moutherot, Les Auxons, Mazerolles-le-Salin, Mercey-le-Grand, Mérey-Vieilley, Miserey-Salines, Montferrand-le-Château, Noironte, Pelousey, Pirey, Placey, Pouilley-Français, Pouilley-les-Vignes, Pugey, Rancenay, Recologne, Ruffey-le-Château, Saint-Vit, Serre-les-Sapins, Tallenay, Thise, Thoraise, Torpes, Velesmes-Essarts, Vieilley et Villers-Buzon.



A PROJECT CONTRIBUTING TO THE ECOLOGICAL TRANSITION

The prospective interest of the area was shown through surveys in the region (*dating from the 1960s and 1950s*), mentioning the presence of helium, associated with carbonic gas, nitrogen, and, for some, natural hydrogen.

Helium is a natural, rare and strategic resource, present in the subsurface and, to this day, exclusively imported from Western Europe at great energy cost. The challenges linked to this dependence on foreign imports are further exacerbated by the Russian-Ukrainian conflict and the current global transport difficulties. Furthermore, its unique characteristics (*inert, light, non-toxic, high thermal conductivity, odourless, low viscosity...*) make it essential for many crucial industries such as the medical (*MRI, respiratory treatment*), electronics (*semiconductor, optical fibre, LCD screens...*) or even aeronautics and space sectors. Local valorization of helium managed in a short circuit, would not only contribute actively to national sovereignty over this type of critical resource, but would also drastically reduce the impact of the industry.

Industrial carbonic gas is also experiencing major supply difficulties. Despite its unprecedented volume in the atmosphere, its concentration remains too low to purify it efficiently by simple air filtration. Therefore, it is currently produced industrially, mainly for the needs of the food, cryogenic and fire-fighting sectors. The value of helium and natural carbon dioxide in the area would mean satisfying two local markets in high demand.

Finally, the presence of a minor fraction of natural hydrogen can not be excluded either. Such a resource, even if it only presents a few percent, could easily be valorized thanks to synergies offered by co-valorisation and thus participate in the production of a completely decarbonised hydrogen, cheap and used 100% locally.



FIGURES TO KEEP IN MIND

2

This is the number of helium exploration licenses granted in France to this day, all being held by 45-8 ENERGY

7

This is the French consumption of gaseous helium in millions of m³/year.

12

This is the preliminary and conservative estimate of helium reserves in the area, in millions of m³, which would cover nearly two years of national consumption.



FOR MORE INFORMATION:

www.am.458energy.com

CONTACT US :

communication@458energy.com