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The sen4H2 (Sentinel Data for the Detection of Naturally Occurring Hydrogen Emanations) research project, supported by the European Space Agency (ESA), has just been launched.

Carried out in collaboration with [Terradue](#), an Italian company providing Cloud Platform services specialized for the processing and analysis of earth observation data, and IFP Energies nouvelles, the project aims to evaluate the contribution of satellite images to the detection and qualification of natural hydrogen emanations on the Earth's surface.

This project, which will end in December 2019, is also supported by industry partners [ENGIE](#) and [Storengy](#).

The first natural sources of hydrogen were discovered along the mid-ocean ridges in the 1970s, but being located in very deep water, their exploitation is not an option. Since the 2000s, industry and research organizations have been interested in evidence of the presence of naturally occurring hydrogen emanations on land. Although assessing the feasibility of industrial production will require

significant R&D work to remove existing barriers, recent discoveries, particularly in Mali, have boosted industrial interest. Identifying a "signature" of the presence of naturally occurring hydrogen emanations is an essential first step.

Within the sen4H2 project, the teams at IFP Energies nouvelles will contribute their understanding of the processes of natural hydrogen generation and migration, resulting from more than ten years of research, as well as their skills in remote sensing and data science. Initially, sen4H2 will focus on known areas of surface hydrogen emissions in Russia and the United States.

Find out more : Our expertise > [Hydrogen](#)

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Detecting naturally occurring hydrogen emanations with satellite images - Launch of the sen4H2 project

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