
Hydrogen from natural sources

Von Hans-Robert Richarz

Hydrogen is considered to be the energy source of the future because it has no impact on the climate as long as renewable energy such as electricity from wind, water or solar power is used to produce it. Around 53 kilowatt hours of electricity are required to produce one kilogram of hydrogen. The gas obtained in this way is considered secondary energy. However, hydrogen is also available as primary energy - provided it comes from natural sources. Such deposits are extremely rare, according to popular opinion. However, according to a study by the US Geological Survey, there is so much natural hydrogen hidden deep underground that it could supply the world with energy for thousands of years.

In Albania, for example, researchers have discovered a huge underground source of hydrogen. A team from the University of Grenoble found what is believed to be a huge source inside a chromite mine in Bulqiza, Albania, around 50 kilometers from the capital Tirana. "At least 200 tons of H₂ are emitted annually from the mine's tunnels, representing one of the largest H₂ flow rates recorded to date," the researchers reported, according to a study.

Meanwhile, in Mali, West Africa, a power plant running on natural hydrogen supplies an entire village with electricity, and just as coincidentally as there, researchers in the Lorraine region of France discovered a large deposit of natural hydrogen in May last year. A team from the georesources laboratory of the local university, the National Center for Scientific Research (CNRS) and the energy producer La Française de l'Energie wanted to investigate the methane content in the ground there and instead came across natural hydrogen. The deeper they drilled, the more hydrogen they were able to detect.

Further deposits were found in the USA, Canada and Australia. The results so far could indicate a promising and inexpensive alternative to green hydrogen, which currently costs around five euros per kilogram. White hydrogen would only cost 50 cents per kilogram, estimates the US news and research magazine Science. Unless a new hydrogen tax makes the rounds worldwide. (aum)

Images for article

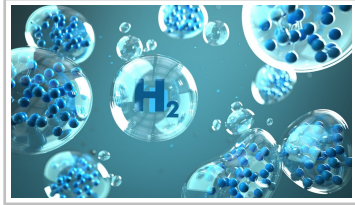


Photo: Autoren-Union Mobilität/BVEG
