

Underground Hydrogen Storage Market Size, Share & Trends Analysis Report By Storage Type (Porous Media Storage, Salt Caverns, Engineered Cavities), By Region, And Segment Forecasts, 2023 - 2030

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Abstracts

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Underground Hydrogen Storage Market Growth & Trends

The global underground hydrogen storage market size is expected to reach 5.05 BCM by 2030, according to a new report by Grand View Research, Inc. The market is expected to expand at a CAGR of 10.7% from 2023 to 2030. The underground hydrogen storage market is projected to observe significant growth over the estimated period owing to an increase in hydrogen production and a lack of viable alternatives for large-scale hydrogen storage. Underground hydrogen storage is currently the only viable large-scale storage technology for hydrogen due to its ability to safely store large quantities of hydrogen in a compact and secure location. One of the main advantages of underground storage is that it is much safer than above-ground storage as hydrogen has a very low flash point and is highly flammable. Underground storage eliminates the risk of accidents or leaks as the hydrogen is stored deep below the ground in a sealed container. This also means that there is no risk of damage to the surrounding environment or infras

tructure in the event of an accident.

Salt caverns dominated the type segment in 2022 and this segment is expected to maintain its position over the forecast period. Salt caverns are developed from existing salt reserves. Underground salt caverns are considered the best option for bulk



hydrogen storage due to their structural strength, which makes caverns capable enough against degradation to ensure the long life of the storage facility.

Demand for underground hydrogen storage is projected to rise over the forecast period owing to the increasing demand for hydrogen and programs to cut carbon emissions. The increasing investments in research and development for underground hydrogen storage in regions like North America, the Middle East & North Africa, and the Asia Pacific are expected to strengthen market growth.

Underground Hydrogen Storage Market Report Highlights

In terms of volume, salt caverns in the storage type segment accounted for a prominent share of the market in 2022 and this segment is further expected to witness steady growth over the forecast period

In 2022, Europe accounted for more than 53.88% share of the overall market. Lower building and operational costs coupled with higher safety offered by salt caverns are expected to result in the growth of the salt caverns storage segment in the underground hydrogen storage market in regional economies

Various strategic initiatives have been recorded over the past few years to boost the growth of the market. For instance, in January 2021, Storengy and HyPSTER collaborated for an investigation on the conversion of a salt cavern facility to underground hydrogen storage situated in Etrez, France



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