

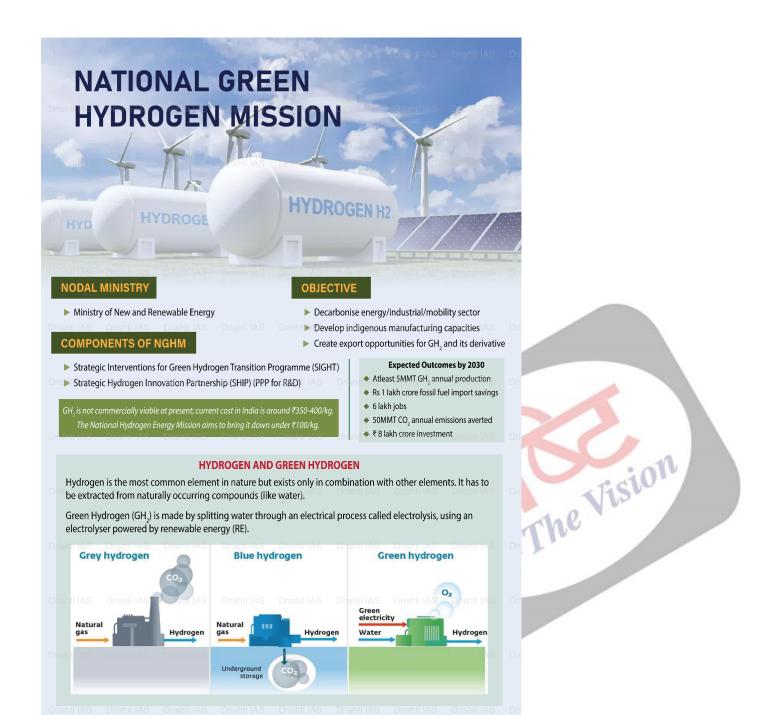
Green Hydrogen Plant Inaugurated in Madhya Pradesh | Madhya Pradesh | 27 May 2024

Why in News?

GAIL (India) Ltd has successfully launched its first green hydrogen plant at Vijaipur in Guna district of Madhya Pradesh.

Key Points

- The 10-megawatt proton exchange membrane electrolyser for the green-hydrogen producing unit at the Vijaipur complex has been imported from Canada.
- The plant will produce about 4.3 tonnes of green hydrogen per day, with a purity of about 99.999% by volume.
 - It uses electricity produced from **renewable sources** such as the sun's <u>solar energy</u>, to split water to produce green hydrogen.
 - The plant is in line with the <u>National Green Hydrogen mission</u> that has set out a goal of 5 million tons of annual green hydrogen production capacity for the country by 2030.
 - India is putting increased focus on hydrogen as an alternative fuel source to lower its carbon emissions, while also meeting its growing energy needs.
- Initially the hydrogen produced from this unit shall be used as a fuel along with natural gas for captive purpose in the various processes and equipment running in the existing plant at Vijaipur.
 - Further, this hydrogen is planned to be dispensed to retail customers in the nearby geographies, transported through high pressure cascades.
- GAIL is also setting up around 20 MW Solar power plants at Vijaipur (both ground mounted and floating) to meet the requirement of green power for the 10 MW PEM Electrolyzer.
- GAIL is currently experimenting in Indore by mixing hydrogen with natural gas in its CGD (city gas distribution) network to evaluate its effectiveness.
 - If successful, the plan is to increase the blending ratios with the required approvals as per the test outcomes.
 - **Present rules permit blending up to 5% hydrogen with natural gas**. Collaborative research is being conducted by GAIL along with **Engineers India Limited** and **IIT Kanpur** to explore higher blending levels of hydrogen with natural gas.



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