

PSUs seek partners for green hydrogen projects

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MUMBAI: As the race to reach emission goals intensifies, state-run energy companies are hunting for partners to tie up and build green-hydrogen facilities to run their refineries and sell the fuel commercially.

Indian Oil Corp. Ltd (IOCL), Bharat Petroleum Corp. Ltd, Hindustan Petroleum Corp. Ltd, NTPC Ltd and Gail (India) Ltd, among others, plan to set up green hydrogen facilities over the next three years.

While IOCL has issued a global tender to develop green hydrogen generation facilities on a build-own-operate basis at its refineries in Mathura, Uttar Pradesh, and Panipat, Haryana, Gail has floated global tenders to procure an electrolyzer.

Gail has shortlisted three sites, including one at Vijaipur in Madhya Pradesh, and will take around 14 months to set up the 10-megawatt facility.

State electricity producer NTPC has also announced a 5MW green hydrogen plant.

“We have on a pilot basis started mixing hydrogen in natural gas in one of the cities. The hydrogen we plan to produce can be sold to fertilizer units which, as per government man-



The green hydrogen demand is expected to grow to 2MT per annum in India by 2030. AFP

date, are required to use hydrogen as fuel,” Gail chairman and managing director Manoj Jain said last month.

IOCL, on the other hand, plans to develop a green hydrogen generation facility with a 5,000 MT annual capacity for its refinery in Mathura and a 2,000 MT annual capacity for its refinery in Panipat.

Green hydrogen is produced by a process that does not emit greenhouse gases. Global efforts are on to cheaply produce green hydrogen, the fuel that can help countries attain their net-zero emission targets.

Refineries use large quanti-

ties of hydrogen for de-sulfurization to make petrol, diesel and other chemicals. Currently, hydrogen is made at the refinery via steam reforming of natural gas, resulting in high CO2 emissions. Therefore, refiners are setting up large-scale electrolyzers to produce green hydrogen from water and decarbonize hydrogen production.

It is anticipated that the green hydrogen demand in India for applications such as refineries, fertilizers and city gas grids will grow to 2 million tonnes per annum by 2030, in line with the nation’s green hydrogen mission. This would call for investments upward of \$60 billion.

“Hydrogen is the cheapest source of energy available to mankind. At the cost of around \$1-1.50 per kg, there is no reason for the world to use fossil fuel at all, and damaging the survival of our planet,” said Pashupathy Gopalan, an investor in Ohmium International, a renewable energy startup. The firm is planning to bring down the cost of hydrogen to \$1 per kg by 2025.

BPCL collaborated with Bhabha Atomic Research Centre (BARC) to scale up alkaline electrolyzer technology for green hydrogen production this month. Currently, electrolyzer plants are imported.

PSUs scout for partners to build green hydrogen plants

IOCL and HPCL, among others, plan to set up green hydrogen projects in the next three years

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Ohmium is planning to bring down the cost of hydrogen to \$1 per kg by 2025 and sees the price of hydrogen lower than that of diesel at \$2-2.5 per kg at retail fuel outlets. BPCL collaborated with Bhabha Atomic Research Centre (BARC) to scale up alkaline electrolyzer technology for green hydrogen production this month.

Currently, electrolyzer plants are imported. This is a first of its kind initiative to support the country's commitment to achieve renewable energy targets and reduce greenhouse gas emissions. Arun Kumar Singh, chairman and managing director of BPCL, said, "Through collaboration with BARC, we intend to scale up the indigenous alkaline electrolyzer technology and look forward to commercializing it for large use, especially in refineries."

BPCL plans to achieve net-zero emissions by 2040.

REDUCING EMISSIONS

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NTPC has on its part also announced the setting up of a 5 megawatt green hydrogen plant

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