

Expect sharp rise in green hydrogen output capacity in 2-3 years: MNRE official

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India is set for a jump in its capacity to produce green hydrogen in two-three years with a long list of projects waiting to be commissioned.

Growth will ramp up decarbonisation in hard-to-abate sectors and bring the country closer to its “net zero” target for 2070.

The government has initiated projects in steel and transport, including shipping. Many are operational or have been partially completed, said Prasad Chaphekar, director, Ministry of New and Renewable Energy, adding that in the refinery segment, tenders had been awarded for around 20,000 tonnes, with another

10-12 tenders in the pipeline.

“We have issued tenders for 1 MTPA (million tonne per annum) of green hydrogen production capacity, supported by subsidies. Several plants under construction are expected to be commissioned soon. The commissioned green hydrogen capacity currently stands at 8,000 tonnes, and over the next three years, the government expects a sharp rise in capacity, targeting at least 200,000 tonnes,” he said speaking at an event in New Delhi.

Chaphekar said smaller plants, which do not require connectivity and land support and can be commissioned faster, were being left out of the current subsidy system.

He added that the govern-

ment was introducing a subsidy scheme for small-scale plants, but this was yet to be approved.

“We have worked on standards, regulations and enabling frameworks, including policies related to special economic zones, environmental clearances, and transmission waivers,” he said, commenting on the government’s efforts to increase the deployment of green hydrogen.

Recently, India recorded the country’s lowest ever price of green hydrogen at ₹279 (\$3.08) per kg. It was recorded in a bid to supply 10,000 tonnes annually to the Numaligarh Refinery in Assam. Oil India, a state-run company, owns a majority stake in the refinery.

In contrast, grey hydrogen

is priced below ₹200 per kg. Introducing a carbon tax or a clear carbon taxonomy framework would drive a faster adoption of green hydrogen, said Anuj Sharma, chief executive officer, Waaree Energies’ hydrogen business, speaking at the same event.

“With continued research, development and efficiency improvement in electrolysis, this gap can close further. Demand mandates would scale up the industry, attract investment in research and development and accelerate cost reduction,” he said.

Under the National Green Hydrogen Mission, launched in 2023 with an initial outlay of ₹19,744 crore, India is targeting a capacity to produce 5 million tonnes annually by 2030.