India's green hydrogen offtake contracts cross 5.5 lakh tonnes a year – world's largest, says MNRE

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News

The Ministry of New and Renewable Energy (MNRE) said on 29 Oct 2026 that since the National Green Hydrogen Mission began (2023), Indian firms have signed 23 offtake (supply) contracts totalling 5,55,610 tonnes a year of 'green hydrogen equivalent' – the world's largest such commitments. In 2026 alone, 18 deals (over 4 lakh tonnes) were signed. Over 70% is meant for export (Japan, Germany, South Korea). These are future supply commitments, not current output; they need over ₹90,000 crore of investment.

Key facts

Announced by	MNRE, 29 Oct 2026
Contracts	23 deals – 5,55,610 tonnes a year (green H_2 equivalent); about 11% of the 2030 target
Exports	Over 70%; Japan, Germany, South Korea
Key deals	Reliance–Samsung C&T (S. Korea, green ammonia, over $3 bn, from 2028); AM Green–Germany (H2Global auction, from 2029)
Domestic (SIGHT)	6.7 lakh tonnes a year of green ammonia for 11 fertiliser units; 30,000 tonnes of green hydrogen for IOCL, BPCL, HPCL, NRL refineries

Investment	Over ₹90,000 crore (about $9.5 billion)

Background

- National Green Hydrogen Mission: approved by the Union Cabinet in Jan 2023; target of at least 5 MMT a year of production capacity by 2030; expected to bring over ₹8 lakh crore of investment, 6 lakh jobs and avoid 50 million tonnes of carbon emissions a year. Implementing agency for the auctions – SECI (Solar Energy Corporation of India).
- An 'offtake' contract is a long-term commitment to buy a fixed quantity from a producer. Since hydrogen gas is hard to ship, it is exported as ammonia (NH_3) or methanol (CH_3OH) – hence volumes are counted as 'green hydrogen equivalent'.
- Science: ammonia is made by the Haber–Bosch process – nitrogen + hydrogen over an iron catalyst at high pressure (about 200 atm) and about 450–500°C. With hydrogen from natural gas it is 'grey' ammonia; with hydrogen from renewable-powered electrolysis it is 'green' ammonia.
- H2Global: a German auction mechanism to import green hydrogen derivatives; its intermediary HINT.CO buys on long-term contracts and resells in Europe on short-term contracts. Numaligarh Refinery (NRL) – Golaghat district, Assam; an outcome of the 1985 Assam Accord.

Tamil Nadu link: no Tamil Nadu-specific deal is named in this announcement. The Chennai Petroleum Corporation (CPCL) refinery at Manali, Chennai, is a subsidiary of Indian Oil (IOCL); replacing grey hydrogen with green hydrogen in refineries is a key aim of the Mission.

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