

HAI Newsletter



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Prahlad Joshi announces ₹100 Cr. support for green hydrogen start-ups

Union Minister of New and Renewable Energy Prahlad Joshi announced financial support of Rs 100 crore for start-ups engaged in green hydrogen research and development (R&D), with a maximum of Rs 5 crore per project. “With this support, the scheme will help our start-ups to develop new hydrogen technologies, whether in production, storage, transport, or utilisation,” Joshi said. The minister noted that India’s R&D spending typically falls short across sectors. To address this, the government has decided to extend financial assistance to start-ups in the green hydrogen R&D space, he added. “India will not import innovation. We will innovate in India, for India, and for the world,” Joshi said, speaking at an event on green hydrogen R&D. The minister also launched a green hydrogen safety panel under the National Green Hydrogen Mission (NGHM), introduced in January 2023. He stressed the importance of prioritizing safety when dealing with highly flammable fuels such as green hydrogen. “Safety is not negotiable. The panel will guide on standards, protocols, awareness, and training. It will identify gaps and ensure that India adopts the world’s best practices,” Joshi said.”

Ref: <https://www.business-standard.com/>



We can never
obtain peace in the
outer world until
we make peace
with ourselves.

Dalai Lama

EVERYDAY POWER

India Will Power Global Hydrogen Shift, Says Hardeep Puri

India aims to produce 5 million metric tons (MMT) of green hydrogen annually by 2030, according to Union Minister Hardeep Singh Puri. The cost of green hydrogen has fallen from \$3.50 to \$3 per kilogram, leading to \$150 billion in import savings. Public sector units plan to achieve a capacity of 1 MMT by 2030, with tender capacities increasing significantly. India targets to capture 10% of the global hydrogen market under Prime Minister Modi’s leadership, with projects worth around 900 KTPA awarded to 19 companies. Puri highlighted India’s position as the third-largest energy consumer, with significant recoverable crude oil and natural gas reserves, and emphasized ongoing reforms and investments in the energy sector to facilitate growth.

Ref: <https://www.sarkaritel.com/>



India's Mega Green Hydrogen Hub Opens to Global Developers Fuel Cells Works

NTPC Green Energy Ltd (NGEL), the green arm of India's largest power generator, is inviting Indian and international developers to set up green hydrogen and green chemical projects at the country's first National Green Hydrogen Hub in Pudimadaka, Andhra Pradesh. The expressions of interest (EoI), released on 24 September, are open until 24 October and offer access to one of the world's most ambitious green molecule production zones — with a planned capacity of 2.5 million tons per annum of green ammonia, methanol, sustainable aviation fuel (SAF), and green urea. Selected developers must source renewable power, water, and green hydrogen exclusively from NGEL, which is building out the core infrastructure: 7 GW of electrolyser capacity, 7.5 GW of grid transmission, a desalination plant, chemical storage, and a captive port for export. The site is part of a ₹1.85 trillion (\$22.2 billion) investment co-led by NGEL and the Non-conventional Energy Development Corporation of Andhra Pradesh (NREDCAP). Agreements may include land sub-leases, water and RE power supply, biogenic CO₂ delivery, and potential joint ventures with NGEL.

Ref: <https://fuelcellsworld.com/>



CM Adityanath inaugurates Torrent Group's green hydrogen plant in UP

Torrent Group's green hydrogen plant in Gorakhpur in Uttar Pradesh was inaugurated by state chief minister Yogi Adityanath. The project, jointly developed by Torrent Group entities Torrent Power and Torrent Gas, will have an annual production capacity of 72 tons per annum, the group said in a statement. "The Green Hydrogen produced at the plant will be blended with natural gas in Torrent Gas' City Gas Distribution infrastructure in Gorakhpur, maintaining its concentration up to 2 per cent," it said. The green hydrogen blended with natural gas will be further supplied to domestic households, CNG stations and industries in the region through the already laid network of natural gas pipelines. "Torrent's green hydrogen plant in Gorakhpur is the first Green Hydrogen plant in Uttar Pradesh and is also the largest Green Hydrogen and Natural Gas blending project in the City Gas Distribution sector in the country," the statement said.

Ref: <https://www.business-standard.com/>



India launches first port-based green hydrogen project

The VO Chidambaranar Port in Thoothukudi, Tamil Nadu, India, has become the first port in the country to produce green hydrogen. The pilot project will use the fuel to power port streetlights and an electric vehicle charging station. Built at a cost of approximately \$52.3m, the facility is expected to produce 10 normal cubic meters per hour of green hydrogen. It is slated to become a key part of the proposed Coastal Green Shipping Corridor between Kandla and Tuticorin. Speaking at the launch, Shri Sonowal, the Union Minister of Ports, Shipping and Waterways, also announced plans for a 750 cubic meter green methanol bunkering and refuelling pilot project. "The projects launched will generate thousands of jobs, attract global investments and position Tamil Nadu as a key contributor to India's economic aspirations," he said. Green hydrogen is seen as a pathway to decarbonise port operations and shipping by replacing fossil fuels in equipment, providing onshore power for vessels at berth, and serving as a clean bunkering fuel.

Ref: <https://www.gasworld.com/>



India awards 862 KTPA green hydrogen capacity, eyes 10% of global demand

India has awarded 862 KTPA of green hydrogen production capacity to 19 companies under the National Green Hydrogen Mission, Union Minister of State for Power and New & Renewable Energy Shripad Naik announced at the FICCI Green Hydrogen Summit 2025. Speaking at the event in New Delhi, Naik outlined India's ambition to capture about 10% of the global green hydrogen demand, projected to exceed 100 MMTPA by 2030. "We want to make India not only a major producer but also a global hub for green hydrogen exports," he said. The government has also allocated 3,000 megawatts of electrolyser manufacturing capacity to 15 companies, Naik added. The minister highlighted India's renewable energy capacity as a foundation for its hydrogen plans. As of June 2025, India's cumulative renewable energy capacity stood at 237 gigawatts (GW), including 119 GW from solar, 52 GW from wind, and 49 GW from large hydro. Including 8.78 GW of nuclear power, non-fossil fuel sources account for more than half of India's total installed generation capacity.

Ref: <https://www.business-standard.com/>



Horizon launches 3MW hydrogen fuel cell module for data center backup

Horizon Fuel Cell has launched a new 3MW module designed to act as backup for data centers. The fuel cell solution, known as Horizon Packs, is a containerized system around 40 feet (12.1 meters) in size. According to the company, the cells can provide 100 percent more power than proton-exchange membrane (PEM) fuel cells and 300 percent more power than solid oxide fuel cells (SOFC), which have seen the most traction within the data center market. The company stated that the small footprint is made possible by incorporating its 400kW fuel cell stacks, which have been rolled out across its hydrogen-powered heavy-duty vehicle initiative. Horizon said that the new fuel cell solution fits perfectly within a data center's infrastructure, due to its high-power density, small footprint, and low carbon credentials, with water as the only byproduct. In addition, Horizon also announced a one-ton hydrogen storage system, which can supply the fuel cells with fuel for its operations. According to the company, multiple units of the system, which are also housed in a 40-foot container, can provide between eight and 40 hours of backup power.

Ref: <https://www.datacenterdynamics.com/>



Construction begins on world's largest hydrogen fuel-cell power plant

Construction has begun on the world's largest hydrogen fuel-cell power plant, a 108MW facility in South Korea. The 819.1bn-won (\$580.7m) Gyeongju Gangdong Hydrogen Fuel Cell Power Project, in the southeastern city of Gyeongju, North Gyeongsang province, will use grey hydrogen produced on site from natural gas to provide baseload power to the grid from 2028. The project, being developed by local companies ESD Holdings and Gangdong Energy, will surpass the current record holder, the 79MW Shin Incheon Vision Dream hydrogen fuel-cell power plant in Incheon, South Korea. North Gyeongsang believes that the power plant will be able to stabilize power supply and demand in the East Coast industrial belt, including Gyeongju, Pohang, and Ulsan, and respond to the rapidly increasing power demand for data centers and other facilities. "Energy is the rice of future industries," provincial governor Lee Cheol-woo said at the official groundbreaking ceremony. "The construction of this power plant goes beyond simply generating electricity."

Ref: <https://www.hydrogeninsight.com/>



Upcoming events:

- World Hydrogen Week**
6-10 October 2025,
Copenhagen, Denmark
- **Renewable Energy India Expo**
30 October- 1 November
2025 Greater Noida, India
- **3rd International Conference on Green Hydrogen (ICGH)**
6-7 November 2025,
New Delhi, India
- **12th International Hydrogen & Fuel Cell Conference (IHFC 2025)**
8th-9th December 2025,
Uday Samudra, Kovalam Beach, Kerala



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Bloom's Fuel Cells Provide Highly Efficient Power Generation for the Marine Ecosystem

The American Bureau of Shipping (ABS) has approved Bloom Energy's 65kW Marine Power Module for use on board ships. This makes Bloom's Power Module the first solid oxide fuel cell (SOFC) to receive Type Approval for marine use, which means it has been tested and approved for use on board ships, including cruise ships, LNG carriers, and long-distance cargo ships. SOFC technology is more efficient than traditional marine power sources and provides the lowest-emissions power generation for the marine ecosystem. With fuel cell power, marine operators can more easily meet stringent carbon emissions guidelines while reducing fuel usage, lowering long-term costs, and increasing reliability.

Ref: <https://fuelcellsworks.com/>



Green Hydrogen-based DRI plant in Austria

A trio of companies — Primetals, Rio Tinto, and Voestalpine — have announced the start of construction of their new green ironmaking plant in Linz, Austria, with start-up scheduled for the end of 2027. The "Hy4Smelt" project will be the first in the world at industrial scale to combine Primetals' HYFOR technology, which uses H₂ to directly reduce iron ore "fines" that would otherwise have to be fused together into larger pellets, with an electric smelting process. While HYFOR can be used with any grade of iron ore, it can specifically process low- or medium-grades which make up most iron ore mined today and are otherwise unsuitable for direct iron reduction.

Ref: <https://fuelcellsworks.com/>



JERA begins producing hydrogen from solid oxide electrolyser at gas-fired power plant

Japan's largest electricity producer, Jera, has started up the country's first demonstration project to produce hydrogen from solid-oxide electrolysis at a thermal power plant. The pilot at the utility's gas-fired Shin-Nagoya power station in the city of Nagoya uses a solid-oxide electrolyser (SOE) developed by Japan's Denso, a major automotive parts supplier that is part-owned by Toyota, using Waste heat from the power plant will be utilised to produce the high-temperature steam needed by the 200kW electrolyser to manufacture hydrogen. "In this demonstration, by applying Denso's thermal management technology to minimises the amount of heat discharged from the SOEC [solid-oxide electrolysis cell], they [Denso and Jera] will work to achieve hydrogen production with world-class electrolysis efficiency," said the two companies in a joint statement. SOEs require less electricity than alkaline or PEM electrolyzers to produce each kilo of hydrogen when incorporating waste heat and can therefore theoretically make H₂ at a lower cost.

