# HAI Newsletter

Hydrogen Association of India

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## MoS Naik urges industry, global firms to invest in Green Hydrogen sector

**Minister of State for New & Renewable Energy Shripad Yesso Naik on Thursday said that Green Hydrogen has the power to ensure energy security and called upon industry leaders to invest in research and development and to build infrastructure in this field. Addressing the inaugural 'CII International Business Conclave on Green Hydrogen' the minister highlighted that Green Hydrogen has the power to reduce dependency on fossil fuels and enhance industrial competitiveness across sectors. "I invite global companies, governments, and financing institutions to partner with us in green hydrogen research, innovation, and trade," the minister said and called upon "India's industry to invest in R&D, scale manufacturing, build infrastructure, and develop human capital."**

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

## Indian Oil finalises India's largest green hydrogen project at Panipat



**State-owned Indian Oil Corporation (IOC) has finalised the levelized cost of hydrogen (LCoH) for setting up a 10,000 tonnes per annum green hydrogen generation unit at its Panipat refinery and petrochemical complex in Haryana, advancing India's clean energy ambitions. "This marks IOC's entry into the green hydrogen space with India's largest-ever green hydrogen project to date," the firm said in a statement. IOC, however, did not give costing and other financial details. "Slated for commissioning by December 2027, the green hydrogen produced will replace fossil-derived hydrogen in refinery operations, resulting in substantial reduction in carbon emissions," it said. Hydrogen is a fuel that finds vast applications across industries ranging from oil refineries to steel plants and can power cars, trucks, trains, ships, and even industrial processes.**

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

## L&T secures land in Gujarat for green hydrogen, ammonia projects

Larsen & Toubro (L&T) on Tuesday said it has secured a land in Kandla, Gujarat for development of green hydrogen and green ammonia projects. The government is actively promoting green hydrogen as a clean energy source, with initiatives like National Green Hydrogen Mission and pilot projects focused on its use in transportation. Addressing the shareholders, company's Chairman & Managing Director S N Subrahmanyan said L&T has made significant advances in emerging clean energy segments, particularly green hydrogen and small modular reactors (SMRs). Electrolyser manufacturing is already in progress, giving the company a first-mover advantage in Green Hydrogen, he said. "A landmark development was the regulatory approval from US Department of Energy for the transfer of SMR technology to India. With L&T figuring among the only three eligible Indian companies for this, this signals the formal start of our SMR journey empowering us to lead the commercialization of nuclear energy in the country.

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

## BPCL & Sembcorp form JV for renewable energy & green hydrogen in India


Bharat Petroleum Corporation (BPCL) announced that Sembcorp Green Hydrogen India, a wholly owned subsidiary of Sembcorp Industries, will form a 50:50 joint venture (JV) with BPCL to develop renewable energy & green hydrogen projects across India. This strategic partnership aims to support India's energy transition and development goals. The collaboration will focus on the production, operation, and sale of renewable energy and green hydrogen, along with its derivatives. "The JV will also consider projects in green ammonia production and bunkering, emissions reduction for port operations, and other emerging green fuel technologies," it said. "The potential projects will leverage Sembcorp's renewables experience and BPCL's expertise in the petroleum sector and infrastructure." Sembcorp is pursuing the use of green hydrogen and ammonia as key decarbonization pathways. With 6 GW of renewable assets in India, Sembcorp is well-positioned to enable large-scale, low-cost green hydrogen production, it added.

Ref: https://renewablewatch.in/

## Need to track green hydrogen utilisation: MNRE secretary

India is preparing a plan to track utilisation of green hydrogen and build global partnerships for exporting the fuel, Secretary Ministry of New and Renewable Energy Santosh Kumar Sarangi said Thursday. Speaking at the CII International Business Conclave on Green Hydrogen, he said traceability of green hydrogen utilisation is very important. He also said concessions for green hydrogen export will be part of India's deliberations in trade agreements. According to the secretary, one is not currently able to decipher whether steel was made using grey or green hydrogen once production is complete. "Having traceability and trackability (of green hydrogen utilisation) is important," Sarangi said. Steel is among the sectors where a push is being made for decarbonisation across the world since it accounts for roughly 10% of global emissions. Sarangi said deliberations are underway with green hydrogen producers to finalise measures for identifying, tracing, and tracking the final product, which is made using green hydrogen.

Ref: https://economictimes.indiatimes.com/

## Cost of green hydrogen in India set to fall by up to 40%: Report


**The cost of green hydrogen in India, the country that is aiming big in the renewable energy space, is expected to fall by up to 40 per cent with the support and incentives the government is providing, according to a report by the Institute for Energy Economics and Financial Analysis. The levelised cost of green hydrogen in India is seen falling towards Rs 260-310 per kg (USD 3-3.75 per kg). India provides cheap renewable electricity to hydrogen manufacturers, waives Inter-State Transmission Charges for open access, lowers distribution and transmission charges, and lowers the GST rate for hydrogen to 5 per cent. Besides, the report asserts electrolyser manufacturers are projected to achieve a 7-10 per cent reduction in total system costs for the first five years, starting in 2024--Rs 2,960/kW (USD 36/kW) being the average annual realisable base incentive. "While the green hydrogen scheme is an important step for India, refinements are needed to promote long-term investment and project viability," says the report.**

Ref: https://economictimes.indiatimes.com/

## Adani Group deploys India's 1st hydrogen-powered truck for mining logistics


Adani group has deployed India's first hydrogen-powered truck for mining logistics in Chhattisgarh, which can carry 40 tonnes of cargo over a 200-kilometre range, the conglomerate said Saturday. Adani Enterprises, the flagship company of the group, flagged off hydrogen fuel cell trucks as it looks to promote cleaner transportation. "These hydrogen-powered trucks will gradually replace diesel vehicles used in the company's logistics operations," the firm said in a statement. "In collaboration with an Indian and international energy technology firm and a major auto manufacturer, Adani is developing hydrogen fuel cell battery-operated trucks for cargo transport. Each truck, equipped with smart technology and three hydrogen tanks, can carry up to 40 tonnes of cargo over a 200-km range." Chhattisgarh Chief Minister Vishnu Deo Sai flagged off the first truck in Raipur. It will be used to transport coal from the Gare Pelma III Block to the state's power plant.

Ref: https://economictimes.indiatimes.com/

## Plug Power Secures 2 GW Electrolyzer Deal for Uzbekistan Green Hydrogen Project


**Plug Power Inc. has just landed a monumental deal with Allied Green Ammonia (AGA), locking in a whopping 2 gigawatts of electrolyzer capacity for a game-changing $5.5 billion green fuels facility in Uzbekistan. During the well-known Tashkent International Investment Forum, it's set to become one of the biggest green hydrogen projects the world has seen. So what's this project all about? In short, it's a massive push to decarbonize sectors that have been tough to clean up—aviation, agriculture, and heavy transport. The facility will use green hydrogen to produce sustainable aviation fuel (SAF), ammonia for fertilizer, and green diesel. Backed by the Uzbek government's broader push to attract international investment and modernize its energy infrastructure, this move could cement Uzbekistan's position as a regional leader in clean energy—and fast. At the heart of this effort are Plug Power's cutting-edge PEM electrolyzers. These machines use electricity from renewable sources to split water into hydrogen and oxygen—with zero emissions.**

Ref: https://www.hydrogenfuelnews.com/

## Upcoming events:

- **5th World Hydrogen Energy Summit**
  01-02 July 2025
  NDMC Convention Centre, New Delhi
- **India Energy Storage Week (IESW)**
  08 - 11 July 2025
  Yashobhoomi, New Delhi
- **GH2 India Exhibition and Conference**
  28 -30 August 2025
  Yashobhoomi, New Delhi
- **Sustainable Mobility Fuels India Summit**
  11 - 12 September 2025
  Eros Hotel, New Delhi

## Japan discovers game-changing metal that boosts Hydrogen output by 1,000%


Japan has revealed an effective way to move toward a green future, as researchers at the RIKEN Institute have a new way of producing green hydrogen, as per a report. While countries like Spain are producing green hydrogen by using renewable energy sources to do electrolysis of water, Japan has found a way to produce the green energy on a sustainable scale, as per the Farmingdale report. Recently, the most popular way of producing hydrogen is via PEM electrolysers, which use a proton exchange membrane as the electrolyte, due to its greater efficiency and ability to respond rapidly to intermittent energy sources, according to the Farmingdale report.

Ref: https://economictimes.indiatimes.com/

## Breakthrough in Hydrogen Fuel Cell Recycling

A team of researchers at the University of Leicester has unveiled a revolutionary new technology that uses soundwaves to recover 92% of platinum from hydrogen fuel cell stacks, dramatically improving the recyclability of these essential clean energy systems. The process not only enhances material recovery but also tackles the environmental risks of PFAS 'forever chemicals' by offering a scalable method to safely separate catalyst materials from fluorinated polymer membranes. Catalyst-coated membranes (CCMs), used in hydrogen fuel cells and electrolysers for vehicles like buses and trains, are notoriously difficult to recycle due to the tight adhesion between precious platinum group metals and the PFAS membranes. But the Leicester team, collaborating with Johnson Matthey, has developed a new method involving organic solvent soaking combined with water ultrasonication.

Ref: https://fuelcellsworks.com/

## Toyota expands hydrogen fleet with fuel cell trucks for European logistics routes

Toyota Motor Europe has integrated its fuel cell systems into 40-tonne hydrogen-powered trucks, supplied by VDL Group, to mark the beginning of real-world demonstrations for zero-emission heavy-duty logistics. Toyota has expanded its fleet of hydrogen-powered heavy-duty trucks to include five vehicles operating across key logistics routes in Europe. Under an agreement with logistics providers Vos Transport Group, CEVA Logistics, Groupe CAT, and Yusen Logistics, the vehicles will operate across Belgium (Diest), France (Lille), Germany (Cologne), and the Netherlands (Rotterdam and Weesp). Toyota has said the fuel cell trucks deliver performance comparable to diesel trucks, with a range of up to 400 km on a single refuelling under real-world driving conditions. "Heavy-duty fuel cell trucks can boost the demand for hydrogen, which is one of the key contributors, along with the implementation of the EU's Alternative Fuel Infrastructure Regulation (AFIR)," explained Thiebault Paquet, Vice-President R&D, Toyota Motor Europe:

Ref: https://www.h2-view.com/

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