

# HAI Newsletter



April 2024

Vol 2: Issue 24

## *Editorial Committee*

Alok Sharma

Kishore K. Bhimwal

### **Gujarat set target to produce 3 MMPTA of green hydrogen by 2030**

Gujarat has floated a pilot project for producing 7.58 tonnes of green hydrogen per day and is also analyzing the feasibility of hydrogen blending with Piped Natural Gas (PNG) for efficient utilization. The state has set a target of producing 3 million metric tonnes per annum (MMPTA) of green hydrogen by 2030 and has allocated two lakh hectares of land for this purpose. “For green growth in the state, Gujarat has allocated ₹2 lakh crore budget for five years. A special land policy has been made for the production of green hydrogen and has allocated 2 lakh hectares of land in Kutch and Banaskantha for this purpose. The Chief Minister said his government is also giving incentives for producing electrolyzers. “The Prime Minister has set a target of 5 MMPTA of hydrogen production by 2030. To meet this target, Gujarat has set itself an ambitious target of producing 3 MMPTA of hydrogen,” he said, adding that Gujarat has the potential to become a green hydrogen hub.



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

### **Steel minister inaugurates first green hydrogen plant in stainless steel sector**

Union Minister for Steel and Civil Aviation virtually inaugurated India's first green hydrogen plant in stainless steel sector. The plant has been commissioned by Hygenco at Jindal Stainless's Hisar facility. The minister highlighted the national green hydrogen mission's support for pilot projects in the steel sector, with a budget of approximately Rs 5 billion until the fiscal year 2029-30. In addition to becoming the first off-grid green hydrogen plant for the stainless steel sector globally, this plant will also be the first to combine rooftop and floating solar. The project has a target of cutting carbon emissions by roughly 2,700 metric tonnes annually and 54,000 tonnes of emissions over the next 20 years.



Ref: <https://renewablewatch.in/>

I believe fuel cells could end the 100-year reign of the internal combustion engine.

William Clay Ford, Jr.

Brains Quote

## Greenzo Energy introduces alkaline electrolyser for green hydrogen manufacturing

Greenzo Energy India Limited has launched its 1 MW Alkaline Electrolyser recently in India. This electrolyzer, crafted under the Make in India initiative, represents a significant innovation poised to expedite India's shift towards a sustainable energy future. The electrolyzer has a plant capacity of 250 MW. Through the utilization of green hydrogen, Greenzo provides customized green energy solutions, contributing to the establishment of a robust and sustainable future. In support of its expansion and innovative endeavors, the company is establishing a manufacturing facility with a capacity of 250 MW per year. The company has also disclosed its intentions to produce alkaline-based technology, with a capacity of up to 5 MW per single stack, at its facility situated in the Sanand-2 industrial area, GIDC Ahmedabad, Gujarat, India.

Ref: <https://renewablewatch.in/>



## Sungrow Hydrogen Launches the 300Nm<sup>3</sup>/h PEM Water Electrolyzer

During the Smart Energy Week 2024 H<sub>2</sub> & FC EXPO hosted in Tokyo Big Sight International Exhibition Center, Sungrow Hydrogen has received extensive attention and praise with the world debut of its 300Nm<sup>3</sup>/h PEM water electrolyzer and the grand release of the flexible hydrogen production solution. The newly released 300Nm<sup>3</sup>/h PEM water electrolyzer from Sungrow Hydrogen not only breaks through the record of hourly hydrogen yield per PEM stack in the Chinese domestic market but also catches up with the international advanced level in several key indicators. The operation pressure has reached up to 3.5MPa with the adaptation of Sungrow Hydrogen's patented sailing structure. Furthermore, multi-gradient coating structures with better corrosion resistance have enhanced the design lifetime of the product.

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



## L&T commissions indigenously built hydrogen electrolyzer at Hazira

Engineering major Larsen & Toubro (L&T) has commissioned its first indigenously manufactured electrolyzer at the green hydrogen plant at A M Naik Heavy Engineering Complex in Hazira, Gujarat, the company said in a regulatory filing. The electrolyzer, featuring a rated power capacity of 1 MW (expandable to 2 MW), can produce hydrogen of 200 Nm<sup>3</sup>/Hr. It features two stacks and an Electrolyser Processing Unit (EPU) ML-400, both developed and assembled in India, conforming to international standards. The focus now shifts to extensive testing over the upcoming weeks to refine its performance and enable large-scale manufacturing capabilities.

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



## Honda unveils new fuel cell electric vehicle – the CR-V e:FCEV

The automaker announced the SUV as the only H<sub>2</sub>-powered passenger vehicle made in the USA. Honda just unveiled its new fuel cell electric vehicle, the CR-V e:FCEV, an SUV it is marketing as the only. The design of the fuel cell electric vehicle is meant to provide zero-emission transportation that makes sense both in the city as well as on longer trips. The US-made system allows drivers to plug in to recharge for driving an EV, which is ideal for urban areas and short jaunts, as well as fast H<sub>2</sub> refueling that provides greater range and practicality for longer drives. The vehicle has a 270-mile EPA range rating while still providing power, cargo capacity and comfortable cabin space. Honda has committed to 100 percent battery electric and fuel cell electric vehicle sales by 2040. This new announcement represents the first production of a plug-in H<sub>2</sub> vehicle in the US in the form of the 2025 Honda CR-V e:FCEV.



Ref: <https://www.pv-magazine.com/>

## Alok Sharma assumes charge as Director (R&D) of Indian Oil

Mr. Alok Sharma has joined as Director (Research & Development) at Indian Oil Corporation Limited (IOCL). Prior to his elevation as Director (R&D), he was serving as Executive Director at Centre for High Technology under the Ministry of Petroleum and Natural Gas (MoPNG). Sharma is a postgraduate engineer in Chemical Engineering from IIT-Delhi and Graduated from Gujarat University. In his previous role, he played a pivotal role in coordinating refining, petrochemicals and alternatives for pan Indian oil and gas industry. During his career in Indian Oil, his various achievements inter alia include a pivotal role in establishing India's first hydrocracker Unit in Gujarat Refinery as well as a Hydroprocessing lab and Resid Block at R&D center. With a visionary approach to catalyze Indian Oil's ambitions in alternative energy, he spearheaded the research and development endeavors in hydrogen, gasification, solar, CO<sub>2</sub> capture, and energy storage technologies. His achievements include successful development of compact reforming HCNG solutions, co-processing of non-edible oils in refinery, nation's first HCNG trials in Delhi, fuel cell and green hydrogen initiatives besides making critical contributions in carbon capture and ethanol technologies.



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

## IH2A submits \$5 billion proposal for hydrogen projects

India Hydrogen Alliance (IH2A) has presented a request to the Ministry of Finance, Government of India, seeking an augmentation in budgetary assistance for the National Green Hydrogen Mission (NGHM) and the establishment of a National Hydrogen Transition and Development Fund with a budget of \$5 billion. The National Hydrogen Transition and Development Fund, amounting to \$5 billion and modeled after the EU Green Hydrogen Fund, proposes to provide backing for extensive hydrogen initiatives, the development of hydrogen hubs, hydrogen supply chains extending beyond electrolyser production, sector-specific plans for transitioning to hydrogen, skill development, and the establishment of hydrogen infrastructure within the nation. IH2A's suggested funding mechanism for the National Hydrogen Transition is reminiscent of the EU Green Hydrogen Fund, which backs nationally significant green hydrogen projects and hydrogen hubs.



Ref: <https://renewablewatch.in/>

## Upcoming events:

- Hydrogen Technology Expo**  
 April 25-26,2024 Hayat Centric,  
 New Delhi
- World Hydrogen 2024 Summit & Exhibition** , 13-15 MAY,2024,  
 Rotterdam ,Netherlands
- Conference on Solar Power in India 2024**, 16 - 17 May 2024,  
 Le Meridien New Delhi
- 10th edition of India Energy Storage Week (IESW)**,  
 July,1-5, 2024, IICC ,New Delhi

## Construction kicks off for first-ever green hydrogen shortsea containership

The ceremony marks the official start of construction for the Samskip SeaShuttle, the world's first green hydrogen shortsea boxship, a project undertaken by Samskip, a Dutch logistics solutions provider, with the help of Cochin Shipyard, an Indian shipbuilder. Samskip says its Sea Shuttle is the first zero-emission shortsea container vessel in the world to be powered by green hydrogen. The vessel, which will be 135 meters (442.9 feet) in length, will be powered by a 3.2-megawatt hydrogen fuel cell, and have a diesel generator installed for backup power.

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



## Green hydrogen projects in Morocco need land, the government offers 1 million hectares

The government of Morocco is throwing its support behind green H2 development in the nation. It's reportedly doing so by allocating one million hectares (2.5 million acres) of public lands to develop green hydrogen. This is part of a new policy designed to back Morocco's efforts to reduce its carbon emissions as well as to make the nation a contender in the global market. According to the Moroccan government, the North African country could "play a major role" in the global energy transition. For starters, it is home to plenty of sunlight all year long and is a chief producer of solar energy.

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



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## Thyssenkrupp, Fraunhofer IKTS to set up 1 GW of electrolyzer production by 2030

Thyssenkrupp nucera and Fraunhofer IKTS want to develop and mass produce electrolyzers based on solid oxide electrolyzer cell (SOEC) technology. They are now setting up a pilot plant in Germany that is scheduled to start operations in about a year. Thyssenkrupp nucera and Fraunhofer IKTS have launched a strategic partnership to develop and scale up the production of SOEC technology. Thyssenkrupp nucera expects to reach 1 GW of manufacturing capacity by 2030. They will produce high-temperature electrolysis stacks with solid oxide electrolyzer cells, which are the core elements of the SOEC stacks. They will initially do it in small quantities to gain a better understanding of the production process and optimize it for large-scale production.

Ref: <https://www.pv-magazine.com/>

