

HAI Newsletter



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Editorial Committee

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Parliament okays bill to encourage renewable energy, carbon trading

The Rajya Sabha passed the Energy Conservation (Amendment) Bill, 2022, aimed at encouraging use of green hydrogen and renewable energy and promoting carbon trading. The bill was passed by the Lok Sabha in August. "The passage of Energy Conservation (Amendment) Bill, 2022 in Rajya Sabha paves the way to enhanced use of renewable energy," power and renewable energy Minister R. K. Singh said on micro-blogging platform Twitter. The bill has provisions to develop a carbon credit trading scheme, renewable energy addition, and clauses to include vehicles, industrial units and buildings, among others, for specific energy consumption standards. The amended Act mandates the use of non-fossil sources, including green hydrogen, green ammonia, biomass, and ethanol for energy and feedstock. "We are relentlessly marching ahead towards our target of reducing India's carbon intensity by 45% by 2030," Singh said. The step is aimed at helping India achieve its climate change targets. India's aim is to be a leader in green hydrogen and achieve over 50% of its power generation capacity from non-fossil fuels by 2030.

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



Quote:

"The future belongs to those who believe in the beauty of their dreams"

-Eleanor Roosevelt

Airbus looking at India, Aus, Latin America for green hydrogen supplies

As part of decentralization, Airbus is looking to source green hydrogen from markets like India, Australia and Latin America. European aerospace major Airbus is looking to source green hydrogen from markets like India, Australia and Latin America as part of its decarbonization efforts, a senior company official said. Airbus is currently developing a hydrogen-powered fuel cell engine for its ambitious zero-emission aircraft that will enter service by 2035. It has also signed a partnership agreement with HyPort to set up a low-carbon hydrogen production and distribution station at the Toulouse-Blagnac airport in France. The cost of renewable energy production in India and Latin America, among others, makes them attractive as potential supply hubs, Glenn Llewellyn, VP Zero-Emission Aircraft at Airbus, said

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



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India well placed to lead green energy transition: Tata Group chairman

India Tata Group Chairman Natarajan Chandrasekaran said transition to a cleaner and greener energy is an imperative that no one can wish away and India is well-placed to lead the change. He further said technological advancements have already made and should continue to make such energy transitions more affordable. The future of any business or industry, whether it is consumer facing or not, will be data-driven as the huge advancements in the field of technology has made real-time data availability both much easier as well as cheaper, he added. "The pressure to shift to green/renewable energy only will increase going forward and the transition to cleaner energy is irreversible. But we need more and newer and cleaner energy so that it becomes more affordable. We need to have hydrogen-based energy, electric batteries, storage systems, technology to reuse of industrial waste etc. "All these will be done in our own lifetime but what we need to ensure is that these solutions are more affordable," Chandrasekaran told students of the Pandit Deendayal Energy University on their convocation in Ahmedabad.

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



Renewable energy sector to boom with likely investments of over USD 25 billion in 2023

With an oil price shock threatening to derail economies globally, the focus has shifted to renewable energy with over USD 25 billion or Rs 2 lakh crore investment planned in India for using sunlight, water and air to produce energy. Oil and gas prices shooting through the roof in 2022 in the aftermath of Russia's war in Ukraine sent governments in import-dependent nations like India scrambling for options. Not just imports but a shift to renewables is also seen as a way to cut carbon footprint and meet net-zero targets. Government in 2022 aggressively pushed for the adoption of electric vehicles, the production of green hydrogen, manufacturing of solar equipment and energy storage in pursuit of its ambitious 500 GW renewable capacity target by 2030. India would have to add at least 25GW of renewable energy capacity per annum for eight years continuously to achieve the 500 GW target by 2030.

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



India has potential to produce sustainable aviation fuel: IATA executive

India is among the countries that have the largest potential to produce Sustainable Aviation Fuel (SAF), which will be a key enabler for the global airlines industry in reducing emissions, according to an IATA executive. The International Air Transport Association (IATA) is a grouping of international airlines. Sebastian Mikosz, Senior Vice President for Environment & Sustainability at IATA, also suggested extending incentives for entities to enter the market for production of SAF. At a media roundtable here, Mikosz said that India is one of the countries which have the largest potential in producing SAF. Airlines will buy SAF, which is expected to account for around 65 per cent of decarbonisation and will be a key enabler in reducing emissions, he added. For production of SAF, there should be access to feedstock like biomass, he said and added that environmental problem has to be tackled at the global level. Civil Aviation Secretary Rajiv Bansal said the government is working on mandating blending of jet fuel with sustainable aviation fuel as the country works on ways to reduce emissions.

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



Toyota unveils prototype Corolla Cross hydrogen combustion engine car

The vehicle is based on the GR Corolla equipped with a 1.6l 3-cylinder turbo engine. That car was equipped with a hydrogen combustion engine with direct injection technology from motorsport activity, in addition to an H2 tank based on the expertise gained from the development and launch of the Mirai. This car has enough room for 5 passengers as well as their luggage. Among the top advantages offered by H2 internal combustion engines (ICEs) is that they provide the capacity to leverage existing ICE technologies in addition to rapid refuelling times and a notable decrease in the use and requirement for rare and expensive elements of which there is a limited supply, such as lithium and nickel (required for battery production). Adaptation of existing technologies and reaching further into existing investments gives H2 ICE tech the chance to provide a faster and more accessible carbon reduction solution, said Toyota.

Ref: <http://www.hydhogenfuelnews.com/>



NTPC to allot 5 GW for green hydrogen, ammonia out of 60-GW RE target by 2032

State-owned power firm, NTPC, plans to use about 5 GW capacity in green hydrogen and ammonia business out of its 60 GW green portfolio target by 2032, said Mohit Bhargava, chief executive director, NTPC REL. “Out of the 60-GW renewable energy target, roughly about 5 GW of our capacity will be used for hydrogen production and ammonia. It will all be green, we are not looking at any other form,” he said in a panel discussion at the ET Energy World Annual Gas Conclave held on 5-6 December, 2022. He added that NTPC is not looking at hydrogen for generation purposes. “Hydrogen in its current context is more useful for industrial uses, rather than for power generation,” said Bhargava. NTPC has already started three pilots on the hydrogen business. One is in Leh in which they are setting up a green hydrogen filling station along with the solar which they are setting up a green hydrogen filling station along with the solar start rolling by July or August next year.

Ref: <https://energy.economictimes.indiatimes.com/>



9th International Hydrogen and Fuel Cell Conference (IHFC)

The Hydrogen Association of India (HAI) organized the 9th International Conference on Hydrogen and Fuel Cells between December 4 and December 6, 2022, at the Lalit Hotel, Barakhamba Road, New Delhi. The conference was supported by sponsors and contributors from all over the world. There was considerable support and cooperation by dignitaries from NITI Aayog, Government of India, Ministry of Petroleum & Natural Gas, Government of India, oil PSU's and many more organizations. International Speakers and delegates from countries like USA, Scotland, Austria, United Kingdom, Australia and Germany were present during the conclave. Around 338 people registered and attended the 3-day conference, comprising of dignitaries from MoP&NG, experts / panelists / speakers, knowledge partners, delegates, and poster presenters. This included 06 nos. of VVIPs includes Secretary and Joint Secretary - MoP&NG, 07 nos. of organizers, 74 nos. of panelists / speakers, 04 nos. of Knowledge Partners, 06 Exhibitors, 14 Poster Presenters and 227 nos. of Delegates. The sessions were planned during the conference on topics such as hydrogen availability, its impact on economy in India, production, storage, transportation, & utilization, hydrogen application for mobility, fuel cells and safety and regulatory measures for hydrogen implementation.

Ref: <https://www.hai.org.in/>



Upcoming events:

- 19th International Conference on Renewable (Online)
24-28th January 2023
www.fuels-of-the-future.com
- India Energy Week 2023
Bengaluru International Exhibition Centre, India
6-7th Feb, 2023
- 5th Hydrogen & Fuel Cells Energy Summit ,
Porto, Portugal, 16-17th March 2023
- Green Hydrogen Society- Gigawatt Scaling for EU's CO2 Neutrality, Tokyo Big Sight, Japan, 16-18th March 2023
- Smart Energy India
Pragati Maidan, New Delhi, 27-29th March 2023



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Future Lies Here

Recent Developments Making Hydrogen Aviation a Reality

Hydrogen-powered aviation has moved closer to reality in 2022, with recent announcements from major aerospace companies Rolls-Royce and Airbus. Ground tests for hydrogen engines are underway, but there are still significant hurdles to overcome before emissions-free commercial aviation can progress. Commercial air transport as it exists today poses a serious threat to the world's agreed emissions targets. Aircraft contribute 2.4% of all anthropogenic carbon dioxide (CO₂) emissions. Combined with other gas emissions and water vapor trails from aircraft, they are responsible for approximately 5% of global warming effects. Developing technological innovations reduces the environmental impact of aviation. New technologies in development focus primarily on propulsion technologies, such as electric aircraft, or new fuels, such as hydrogen.

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



Bank of America expects \$10 billion in India green deals in 2023

India could attract close to \$10 billion in renewable energy investment in 2023, a bright spot as public markets remain largely shut to big-ticket capital raising, according to Bank of America Corp.'s top executives in the country. Deals and investments will continue to flow into areas such as electric vehicles and green hydrogen, Kaku Nakhate, the lender's president and India country head, said in an interview, as investors look to reflect the energy transition in their portfolios. "If you really have to get your ESG story right, and if you are into energy, then you can do large pieces of work in India," Nakhate said. Sectors such as renewable energy and retail are set to benefit as India pulls ahead of emerging market rivals in attracting overseas investors. Even as dealmaking globally has been hit by rising interest rates and market volatility, the South Asian nation's geopolitical stability helps position it for greater inflows. Investors and companies attending the bank's recent North American roadshow were impressed by the Indian government's clear targets to achieve net zero carbon, Nakhate said.

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



A lack of public education is standing in the way of green hydrogen adoption

The survey involved the participation of 2,018 people from countries around the world. The Hydrogen Fuel News survey showed that while there are a handful of reasons that have stopped green hydrogen from taking off more quickly than it has, a lack of public education is by far the main blockage standing in the way. Of the 2,018 participants, 594 (29.4 percent) said that they felt that "Lack of public education" represented the "Biggest problem stopping the world from using more green hydrogen." The second largest problem stopping the world from using more renewable H₂ was that it is currently "too expensive to make, but this will change in the next few years." This showed that while the cost of the fuel is indeed an issue, 529 of the respondents (26.2 percent) feel that this is a barrier that will naturally fade in coming years.

Ref: <http://www.hydhogenfuelnews.com/>



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