India's FIRST Digital Magazine Dedicated to NET ZERO

July-23

Net Zero Wired

ANKIT SHARMA
Editor-in-Chief,
Net Zero Wired

Editor's Message

Dear readers,

Welcome to the latest edition of Net Zero Wired, your go-to platform for all things related to the pursuit of a sustainable future. As we continue to grapple with the pressing issue of climate change, it is crucial now more than ever to explore innovative solutions that pave the way towards a net-zero world. With each passing month, we witness remarkable advancements and inspiring initiatives that bring us closer to our shared goal.

In this edition, we delve into three fundamental pillars of the net-zero journey: Green Hydrogen, Carbon Market, and Decarbonization of Industries. These areas hold immense potential to transform the way we produce and consume energy, mitigate greenhouse gas emissions, and drive sustainable economic growth. Our team of experts and researchers has meticulously curated a collection of insightful chapters, providing you with a comprehensive understanding of these key subjects.

Within the pages you will get to know what all has happened in the last 30 days in the carbon market, green hydrogen, renewable energy, net zero, financing industry and many more.

At Net Zero Wired, our mission is to empower and inspire our readers with the knowledge and insights needed to drive meaningful change. We aim to foster a community of like-minded individuals and organizations dedicated to creating a net-zero future. Through our monthly publication, we strive to equip you with the latest information, ideas, and perspectives to navigate the complex landscape of sustainability.

We sincerely hope that this edition of Net Zero Wired enriches your understanding of Green Hydrogen, Carbon Market, and Decarbonization of Industries, igniting your passion and inspiring actionable steps towards a sustainable and equitable future. Together, let us forge a path towards a world where economic progress and environmental stewardship go hand in hand.

Thank you for your continued support and engagement.

Warm regards

Ankit Sharma

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2nd Edition

GH2 India

Exhibition & Conference

Organised by

SDLC
Sustainable Development Leaders Council

G20 भारत 2023 INDIA वसुधैव कुटुम्बकम् ONE EARTH • ONE FAMILY • ONE FUTURE

Azadi Ka Amrit Mahotsav

03-05 August, 2023 | India Expo Centre & Mart, Greater Noida, India

Green Hydrogen For Energy Security and Climate Resilience

TARGET INDUSTRY

- Green Hydrogen Developers
- Management Consultants
- Renewable Energy Developers
- Energy Storage Providers
- Policy Makers and Regulators
- Equipment Manufacturers
- Power Utilities
- Transmission Grid Operators
- Fuel Cell Manufacturers
- Private Equity Firms
- EPC Contractors
- Financial Institutions
- Technology Providers
- Industry Analysts
- Engineering & Technical Consultants
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- Oil and Gas
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Market Update: Carbon Market of India

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JA Solar Wins French Carbon Footprint PPE2 Certification

JA Solar announced that its n-type PV modules was awarded the carbon footprint PPE2 certification by the French authority Certisolis. It is among the first to obtain certification under the new PPE2 standard, which demonstrates the low-carbon competitiveness across JA Solar's whole supply chain. This certification is required by French authorities for PV products to be used in projects over 100kW.

India launches carbon credit trading scheme to tackle climate change

The Ministry of Energy has recently notified the Carbon Credit Trading Scheme (CCTS) in India, marking a significant step towards establishing a national carbon market. The scheme aims to facilitate the trading of carbon credits between obligated entities within the country.

Carbon Trading Market to Reach US$ 4.8 trillion in 2031, Expanding at a CAGR of 19.0% Says, Transparency Market Research

Transparency Market Research Inc. – The global carbon trading market is projected to flourish at a CAGR of 19.0% from 2023 to 2031. As per the report published by TMR, a valuation of US$ 4.8 trillion is anticipated for the market in 2031. In 2022, the market for carbon trading was valued at US$ 1.0 trillion

Global standards launched to grow $2 billion voluntary carbon market

A global initiative to grow the $2 billion market for carbon offsets outlined criteria for new voluntary standards, and said it aims to issue labelled credits by the year-end to make the unregulated marketplace more transparent.

Aid to India focuses on reducing carbon emissions

The Climate and Nature theme dominates the UK's bilateral aid focus for India, with 75% of around GBP 38 mn allocated for 2023-24 targeted at climate action projects, according to latest statistics

Sikkim aims to go 'carbon negative' by planting 100 saplings for every newborn

Sikkim's journey towards carbon negativity sets a high standard for environmental consciousness and holds the promise of significant health benefits, economic growth, and enhanced tourism. As a model for sustainable practices, Sikkim's achievements inspire other states, empowering them to take similar steps and collectively contribute to a greener and more resilient India.

India's per capita carbon emissions remain low amidst climate change concerns

India's per capita carbon emissions have been hailed as significantly low amidst growing concerns over climate change, said Union minister for power and new & renewable Energy R. K. Singh. The announcement was made during the 14th Clean Energy Ministerial and 8th Mission Innovation Meeting in Goa.

Goa Carbon Q1 Results: Net profit falls 13% to 12.58 crore

Goa Carbon posted a 13% year-on-year decline in net profit to Rs 12.58 crore during the June quarter on account of higher expenses. It had posted a net profit of Rs 14.48 crore in the corresponding quarter in 2022-23, Goa Carbon said in a regulatory filing

GAIL India Ties Up with US-based LanzaTech to Explore Biorecycling Carbon Waste

GAIL (India) Limited and LanzaTech Global, Inc., (Nasdaq: LNZA)—an innovative carbon capture and utilization ("CCU") company that converts waste carbon into products that people use in their daily lives—have entered a partnership to explore innovative technology solutions that advance GAIL's Net Zero 2040 goals and have the potential to support wider decarbonization applications globally.

Researchers focus on monitoring carbon in soil

The U.S. Department of Agriculture announced that it will use $300 million from the Inflation Reduction Act to monitor agricultural emissions, including by creating a research network to monitor carbon levels in soil.To do that, farmers have to be able to measure the amount of carbon in their fields.

India, Japan to sign certification mechanism for renewable hydrogen, carbon credits

India and Japan are expected to sign a "joint credit mechanism" that will enable Japan to buy renewable hydrogen and carbon credits from India generated from renewable hydrogen projects

Carbon capture can free India from the bind of growing without polluting

Capturing CO2 emitted by industries looks like a viable option to keep the economic engines running without harming the world. As a country that cannot afford to slow its pace of growth, India — the third-largest emitter of CO2 — should aggressively invest in this technology.

Market Update: Renewable Energy

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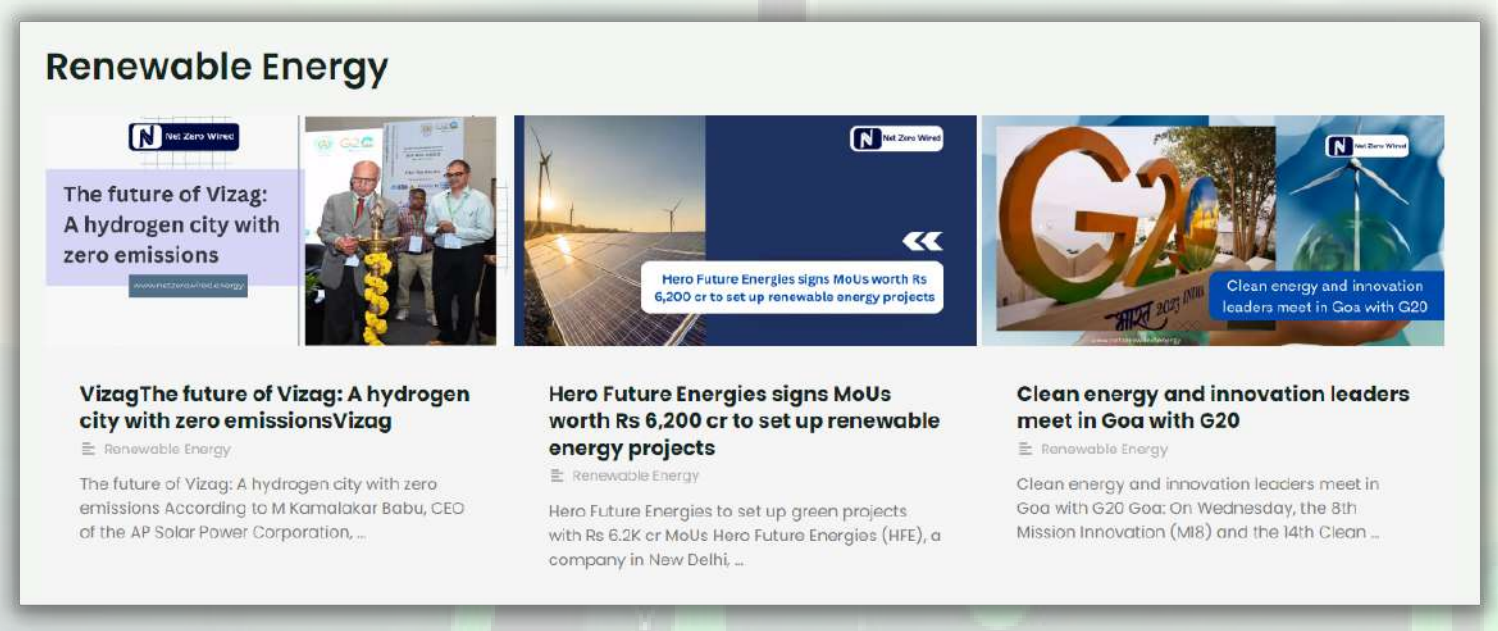
- India among the top 5 countries with installed renewable energy capacity: PM Modi
- Goa working on green hydrogen energy plant: CM Pramod Sawant
- ReNew Power and Gentari in JV to develop 5GW of Indian renewables
- India Added 679 New Renewable Startups In 6 Years
- Adani's unit secures $394 million financing facility for solar module plant
- NDMC approves solar policy; increases transfer duty on property by 1%
- India's REC posts 21% rise in Q1 profit aided by interest income on loan assets
- Hero Future Energies signs MoUs for Rs 6200 crores to develop future renewable energy projects
- Indian PV additions down 19% in H1 2023 – JMK Research
- India achieved its target of producing energy through non-fossil fuel sources ahead of schedule: R K Singh
- India, and Sri Lanka agree to boost ties through energy, power, and port projects
- India's cost of Round-the-Clock renewable energy is 27% lower than China
- India’s Renewable Energy Success: 176.49 GW Installed, Confirms Union Power & NRE Minister
- Avaada secures $2.44 billion from REC for energy transition projects
- To 'green up' portfolio, REC to sign Rs 2 trillion pacts with 20 renewable firms
- Adani AGM: Gautam Adani plans to build 20-GW Khavda renewables park faster than any project
- NLC India plans to invest Rs 24,000 crore in renewable energy projects by 2030: CMD M Prasanna Kumar
- India's first trans-national power plant of 1,600 MW capacity commissioned by Adani Group
- European Investment Bank is all set to fund 500 million euros for the Indian government

- Suzlon wins order for 100.8 MW of wind power from Everrenew Energy Private Limited
- Hyderabad airport goes green with 100% renewable energy
- 1 GW in 1 quarter: India's wind energy capacity addition sees unprecedented jump
- SECI Invites Bids for 500 MW Firm and Dispatchable Power from RE Power Projects in India
- Adani Raises $1.4 B From Stake Sale In 3 Cos; $9 B Raised In 4 Years
- India's Renewable Energy installations to reach 45 GW in next two years: CareEdge Ratings



Market Update: Green Hydrogen

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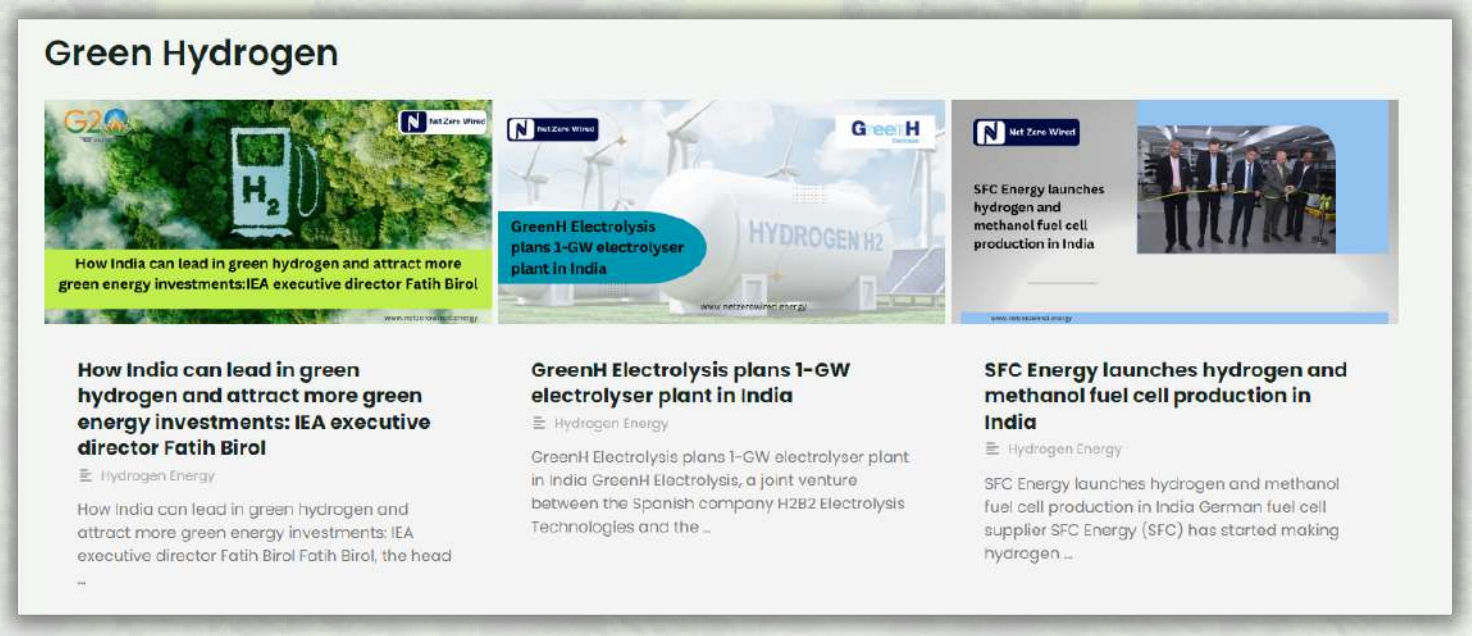
- Goa working on green hydrogen energy plant: CM Pramod Sawant
- U.K. to help Indian companies manufacture electrolysers for green hydrogen
- SFC Energy starts production of hydrogen and methanol fuel cells in India
- Adani New Industries Raises $394 Million to Power Green Hydrogen Ecosystem and Solar Module Manufacturing
- JSW Steel to use green hydrogen for steelmaking at Vijayanagar plant
- GreenH Electrolysis to build 1 GW green hydrogen plant in India
- AP govt sets sights on making Vizag India's 1st hydrogen city
- SFC Energy launches hydrogen and methanol fuel cell production in India
- Gautam Adani and Sri Lankan President Plan to Establish Green Hydrogen Project and Wind Project
- India needs 25 million metric tonnes of hydrogen energy by 2050, says Union Petroleum Ministry Secretary
- Bharat Benz, Reliance Showcase India's First Hydrogen Fuel Cell Coach
- MoS Rameswar Teli announces HPCL's green hydrogen plant establishment in AP
- ReNew signs MoUs worth $7.8 billion for green energy projects
- ISA to launch Green Hydrogen Innovation Centre on 22 July
- Hydrogen fuel cell buses pilot to begin in Delhi
- G20 ministerial meeting: India to sell green hydrogen with carbon credit
- Tata Steel, UK join hands to support green hydrogen, decarbonisation
- IIT-I develops process to produce green hydrogen gas from PET waste in water
- NTPC awards India's largest contract for alkaline electrolysers to Hild Electric

- Hild Electric and NTPC Join Forces for India’s Biggest Alkaline Electrolysers Deal
- Government Floats Tender for Setting up 4.5 Lakh Tonne Production Facility of Green Hydrogen
- Scientists develop technology to produce green hydrogen from seawater
- Bids invited to set up green hydrogen production units
- India tenders 450,000 MT/year of green hydrogen capacity under incentives scheme
- Government Considering Mandate for Green Hydrogen Usage, Says MNRE Secretary
- Govt invites bids for 1,500-MW electrolyser manufacturing capacities under green hydrogen mission
- Green hydrogen can transform India’s $200 bn energy import bill into an export opportunity: Hardeep Puri
- India has set an ambitious target to produce 5 million metric tonne of green hydrogen by 2030, with 70% allocated for exports and the remaining 30% for domestic consumption
- India's first Green Hydrogen fuelling station to start within 3 months
- World Bank approves $1.5 billion for green energy in India



Driving Sustainable Growth: SEBI's Consultation Paper on ESG Disclosures, Ratings, and Investing in India

Nakshatra Gaikwad
Senior Analyst - ESG
First Rate, Inc

In recent years, the world has seen a growing recognition of climate change's economic and financial impacts and environmental, social, and governance (ESG) risks.
India, too, is not immune to these global trends and has seen an increasing demand for responsible and sustainable business practices. Promote transparency, accountability, and responsible investing, the Securities and Exchange Board of India (SEBI) has taken significant strides by releasing a Consultation Paper on ESG Disclosures, Ratings, and Investing.

Understanding ESG Reporting

ESG reporting is a comprehensive approach that evaluates an organization's performance in three key areas: **Environmental** (E), **Social** (S), and **Governance** (G).
It goes beyond financial reporting and considers a company's impact on the environment, society, and governance structure. SEBI recognizes the significance of ESG factors and is determined to enhance transparency and credibility in the Indian securities market.

SEBI's Initiative

SEBI's Consultation Paper on ESG matters was released in response to the growing importance of ESG investing and reporting. The paper looks to address several critical aspects of ESG:

ESG Disclosures: The Business Responsibility and Sustainability Reporting (BRSR) framework mandates the top 1000 listed companies in India to make ESG disclosures from the financial year 2022-23 onwards. The Consultation Paper proposes an assurance mechanism to enhance credibility and investor confidence. It introduces the BRSR Core, consisting of specific Key Performance Indicators (KPIs) under each E, S, and G attribute that require reasonable assurance. The KPIs are quantifiable and outcome-oriented to ease comparability and reflect sustainable outcomes.

ESG Disclosures for Supply Chain: To supply a holistic view of a company's ESG risks and impacts, investors increasingly seek ESG disclosures related to its supply chain. However, this can be complex, especially for smaller unlisted firms and companies with multi-tier supply chains. SEBI's proposal introduces a limited set of ESG disclosures for the supply chain on a "comply-or-explain" basis to strike a balance between transparency and practicality.

Public Involvement and Comments: SEBI recognizes the importance of engaging stakeholders in shaping the regulatory framework for ESG reporting and investing. Through the Consultation Paper, the public is invited to share their views and suggestions on various aspects of ESG disclosures, including the appropriateness of attributes and KPIs in the BRSR Core, the need for supply chain ESG disclosures, and the proposed timelines for implementation.

Driving Sustainable Growth: Focus on ESG disclosures, ratings, and investing is a significant step towards promoting sustainable growth and responsible investment practices in India. As investors increasingly factor ESG parameters into their decision-making, companies must embrace transparency and accountability to attract responsible investors and prove their commitment to long-term value creation.

As India moves towards a more sustainable future, ESG considerations are poised to play a pivotal role in shaping corporate behavior and investor choices, fostering a thriving and responsible capital market ecosystem.

Conclusion

SEBI's Consultation Paper on ESG Disclosures, Ratings, and Investing reflects the growing global awareness of sustainability issues and responsible business practices.

By seeking public input and feedback, SEBI aims to develop a robust regulatory framework that strikes a balance between transparency, ease of doing business, and effective ESG reporting.

As India moves towards a more sustainable future, ESG considerations are poised to play a pivotal role in shaping corporate behavior and investor choices, fostering a thriving and responsible capital market ecosystem.

Content Credit: Trans India Law Associates

Clean Development Mechanism and Kyoto Protocol: An Overview (Part 1)

The Clean Development Mechanism (CDM) is one of the flexible mechanisms established under the Kyoto Protocol, an international treaty that aims to reduce greenhouse gas (GHG) emissions and combat climate change.
The CDM allows developed countries (called Annex I countries) that have emission reduction targets under the Kyoto Protocol to invest in projects that reduce or avoid emissions in developing countries (called non-Annex I countries) as an alternative to more expensive emission reductions in their own countries.
Such projects can earn certified emission reductions (CERs), which are a type of carbon credit that can be traded in carbon markets or used for compliance with emission reduction targets.

The CDM has multiple objectives, such as:

- Assisting non-Annex I countries in achieving sustainable development and contributing to the ultimate objective of the United Nations Framework Convention on Climate Change (UNFCCC), which is to prevent dangerous human interference with the climate system.
- Assisting Annex I countries in meeting their emission reduction commitments under the Kyoto Protocol.
- Providing an incentive for the private sector and public entities to participate in emission reduction activities.
- Promoting the transfer of environmentally sound technologies and know-how to non-Annex I countries.

The CDM is governed by the CDM Executive Board, which is a subsidiary body of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP).
The CDM Executive Board is responsible for supervising the CDM, setting rules and procedures, accrediting operational entities, registering projects, issuing CERs, and ensuring transparency and accountability. The CDM Executive Board is supported by various panels, working groups, and secretariat staff.

The CDM project cycle involves several steps, such as:

- **Project design:** The project participants prepare a project design document (PDD), which describes the project activity, its baseline scenario, its additionality, its expected emission reductions, its environmental and social impacts, and its contribution to sustainable development. The PDD also includes a monitoring plan and a validation report by an accredited operational entity.

- **Validation and registration:** The operational entity validates the PDD by checking its compliance with the CDM rules and methodologies, and submits it to the CDM Executive Board for registration. The registration confirms the project's eligibility to generate CERs.

- **Monitoring and verification:** The project participants monitor the project activity according to the monitoring plan and report the emission reductions achieved. The operational entity verifies the emission reductions by conducting site visits, reviewing documents, and applying quality assurance and quality control procedures. The verification report is submitted to the CDM Executive Board for certification.

- **Certification and issuance:** The CDM Executive Board certifies the verified emission reductions and issues CERs to the project participants. The CERs are recorded in a registry system and can be transferred or traded among various accounts

- **Review:** The CDM Executive Board may review any aspect of a CDM project at any stage of its cycle, either at its own initiative or upon request by a party involved or affected. The review may result in corrections, suspensions, or rejections of projects or CERs.

- The CDM has been operational since 2000 and has registered over 8,000 projects in more than 100 countries, generating over 2 billion CERs.

- The CDM has also mobilized billions of dollars of investment in low-carbon technologies and contributed to sustainable development goals such as poverty alleviation, energy access, health improvement, environmental protection, and gender equality.

- The CDM has also fostered innovation, capacity building, stakeholder participation, and transparency in climate action.

- The CDM is expected to continue beyond 2020 under the Paris Agreement, which is the successor of the Kyoto Protocol.

The Paris Agreement aims to limit global warming to well below 2°C above pre-industrial levels and pursue efforts to limit it to 1.5°C. The Paris Agreement also establishes a new mechanism to facilitate GHG mitigation and support sustainable development, which will build on the experience of the CDM and other existing mechanisms. The details of this new mechanism are yet to be finalized by the parties.

The CDM is one of the most successful examples of international cooperation on climate change mitigation. It has demonstrated that market-based approaches can effectively mobilize resources and incentivize actions to reduce GHG emissions while promoting sustainable development in developing countries. The CDM has also created a valuable legacy of knowledge, expertise, institutions, and networks that can support future climate action under the Paris Agreement and beyond.

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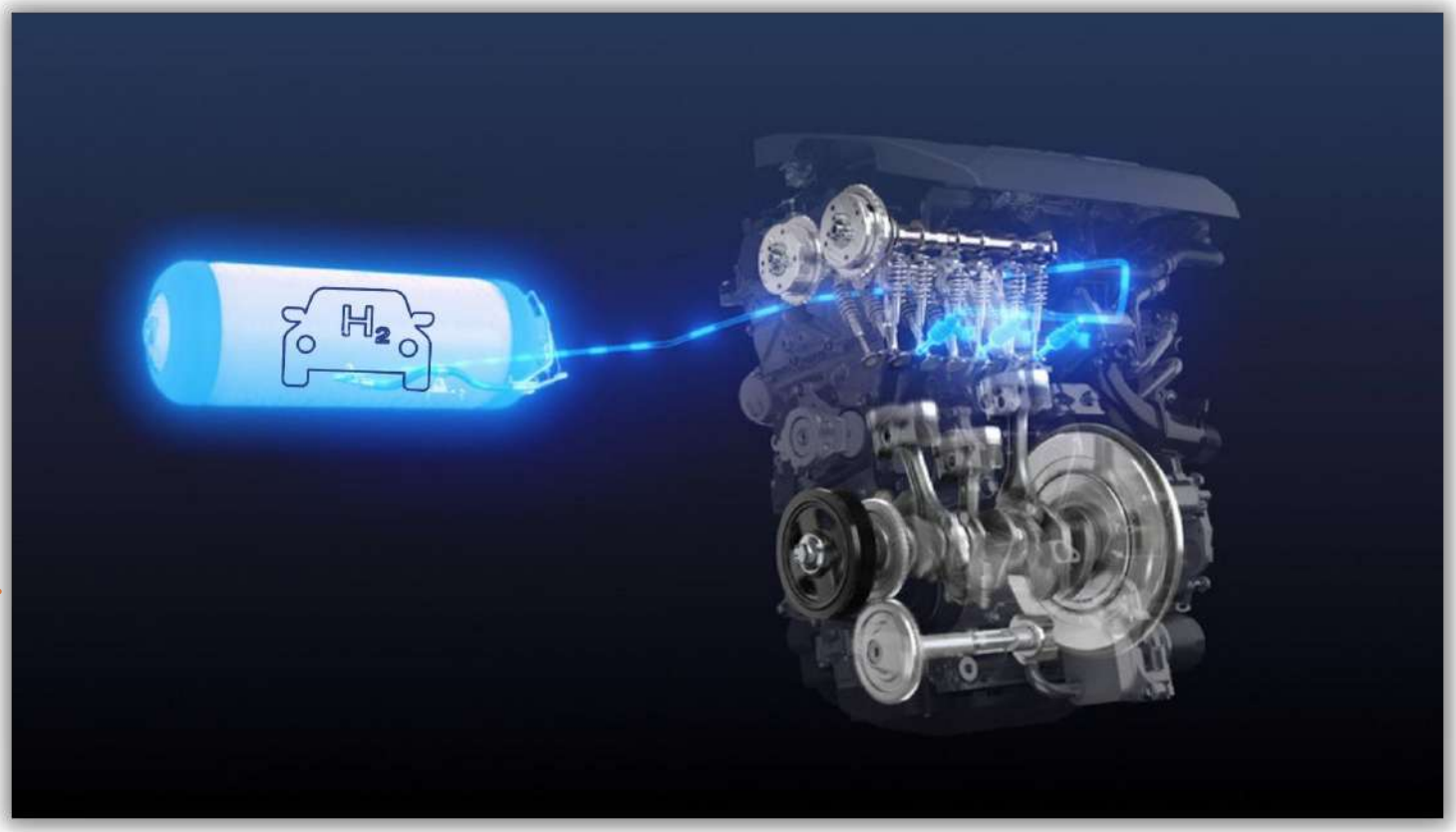
Hydrogen-ICE Engine: Towards Clean Mobility



What is a Hydrogen-ICE Engine?

A hydrogen-ICE engine is a type of internal combustion engine that runs on hydrogen gas instead of gasoline or diesel. Hydrogen gas is burned in a cylinder with air, creating a high-pressure gas that pushes a piston and turns a crankshaft. The crankshaft then drives a transmission and a wheel, propelling the vehicle forward.

A hydrogen-ICE engine is similar to a gasoline engine in many aspects, such as the basic design, the components and the performance. However, there are some key differences that make a hydrogen-ICE engine more environmentally friendly and efficient

Environmental Benefits of Hydrogen-ICE Engine

- A hydrogen-ICE engine does not produce any carbon dioxide emissions, which are the main cause of global warming. The only byproducts of hydrogen combustion are water vapor and nitrogen oxides (NOx), which can be reduced by using catalytic converters or lean-burn technology.

- A hydrogen-ICE engine can use pure hydrogen or hydrogen blended with other fuels, such as natural gas or ethanol. This gives more flexibility and options for fuel supply and distribution.

- A hydrogen-ICE engine can achieve higher thermal efficiency than a gasoline engine, meaning that it can convert more of the fuel's energy into mechanical work. This results in lower fuel consumption and operating costs.

- A hydrogen-ICE engine can run on different types of hydrogen, such as compressed gas, liquid or solid. This allows for different storage and delivery methods, depending on the application and the availability of infrastructure.

What are the Advantages of a Hydrogen-ICE Engine?

A hydrogen-ICE engine has several advantages over other types of engines, such as gasoline, diesel or electric.

Some of these advantages are:

- A hydrogen-ICE engine can be easily integrated into existing vehicles and infrastructure, with minimal modifications and costs. Unlike electric vehicles, which require batteries, charging stations and power grids, a hydrogen-ICE vehicle can use the same fuel tanks, pumps and stations as gasoline vehicles.

- A hydrogen-ICE engine can offer similar or better performance than a gasoline engine, such as power, torque, acceleration and range. Unlike electric vehicles, which suffer from limited battery capacity and long charging times, a hydrogen-ICE vehicle can refuel quickly and travel long distances without compromising speed or comfort.

- A hydrogen-ICE engine can reduce dependence on fossil fuels and enhance energy security. Hydrogen can be produced from various renewable sources, such as solar, wind, or hydropower, using electrolysis or other methods. This reduces the need for importing oil from unstable regions and diversifies the energy mix.

- A hydrogen-ICE engine can create new opportunities for innovation and economic growth. Hydrogen can stimulate the development of new technologies, industries, and markets, creating jobs and value along the supply chain. Hydrogen can also foster international cooperation and collaboration on energy and environmental issues.

What are the Challenges of a Hydrogen-ICE Engine?

A hydrogen-ICE engine also faces some challenges that need to be addressed before it can become widely adopted.

Some of these challenges are:

- A hydrogen-ICE engine still produces some emissions that need to be controlled or eliminated. NOx emissions are harmful to human health and the environment, and can contribute to smog formation and acid rain. NOx emissions can be reduced by using catalytic converters or lean-burn technology, but these solutions may increase the cost and complexity of the engine.

- A hydrogen-ICE engine requires a reliable and affordable supply of hydrogen fuel. Hydrogen production is still expensive and energy-intensive, especially if using renewable sources. Hydrogen storage and distribution also pose technical and safety issues, such as leakage, embrittlement, flammability and explosion risks.

- A hydrogen-ICE engine faces competition from other types of engines, such as gasoline, diesel or electric. Gasoline and diesel engines have a well-established market share and infrastructure, while electric vehicles have gained popularity and support from governments and consumers. Hydrogen-ICE vehicles need to demonstrate their advantages and benefits over these alternatives to gain acceptance and adoption.

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EU approach to lower the CO2 Emissions in Aviation Industry

We believe that together, policy-makers and the industry can make net zero CO_2 emissions a reality by 2050. In 2030, net CO_2 emissions from intra-European flights would be reduced by 55% compared to 1990 levels through a combination of fleet renewal, SAF, operational improvements and EU ETS/CORSIA, in line with the new EU climate goal for 2030.

To achieve net zero CO_2 aviation in Europe by 2050, while upholding international competitiveness and aviation's benefits to society - joint, coordinated and decisive industry and government efforts are required. **The time to act is now to make European aviation's climate ambitions for 2030 and 2050 a reality.**

Here is how improvements in aircraft and engine technologies can make a difference:

1. By 2035, aircraft with **highly efficient propulsion systems** and **30% less fuel consumption**, could become available.
2. Also by 2035, **hydrogen-powered aircraft suitable for short-range intra-European routes** have the potential to reduce CO_2 emissions by 100% as these aircraft progressively enter service.
3. Development of **more fuel-efficient aircraft**, engines and optimised range and capacity of **hybrid-electric rotorcraft** and regional aircraft would reduce CO_2 emissions per flight by 50% compared to 2018. These rotorcraft and regional aircraft should enter service between 2030 and 2035.
4. Both hydrogen-powered aircraft and hybrid-electric rotorcraft and regional aircraft **require dedicated technology readiness** by 2027 to 2030, at both aircraft and propulsion system level.
5. Following their readiness, **new technologies** should be swiftly incorporated in all commercial fixed and rotary wing products. This would require efficient new certification procedures for disruptive technologies.
6. Fleet renewal based on existing state-of-the-art products will continue to reduce CO_2 emissions, and even higher reductions could be achieved in the short term by **accelerated fleet renewal.**

Content Credit: Destination2050

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-34% · -99 Mt

SUSTAINABLE AVIATION FUELS

Sustainable Aviation Fuels (SAFs) have major potential to reduce the aviation industry's climate impact. With SAF use, net CO_2 emissions over the lifecycle can be reduced by up to 80% now, and up to 100% in the future. Any SAF should follow robust and transparent sustainability criteria. Destination 2050 considers only advanced biofuels and synthetic fuels based on the EU Renewable Energy Directive as part of its roadmap.

NET ZERO

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It is estimated that SAFs could account for up to 83% of the total fuel consumption in Europe by 2050.

Here is how the deployment of sustainable aviation fuels can make a difference:

1 Drop-in fuels can be **blended** with conventional kerosene and are certified at a 50% blend for use in existing fleets -- therefore foregoing the need for changes to the aircraft, engine or infrastructure. With engine and system adaptations, this could potentially rise to 100% SAF use in the future.

2 Scaling up and commercialising SAFs remains one of the key challenges. SAFs cost an estimated two to seven times the price of fossil fuels. A **long-term policy framework** is needed to de-risk investments and boost the production and uptake of SAFs. These measures include carbon pricing, investment incentives, and implementing an EU-wide blending obligation.

Content Credit: Destination2050

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-8% · -22 Mt

SMART ECONOMIC MEASURES

Economic measures will initially represent the most promising option to rapidly reduce net emissions from European aviation. The goal is to assign a price to CO_2 emissions, ensuring that airlines and other operators take climate costs explicitly into account in their business decisions. Until SAFs and new aircraft become more widely used and breakthroughs such as hydrogen and hybrid-(electric) technology become available, smart economic measures are fundamental in reaching EU and global climate goals. The most effective measures are emissions trading and offsetting schemes.

NET ZERO

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Here is how economic measures can make a difference:

1 **Emissions trading schemes:**

Through the European Emissions Trading System (EU ETS), the number of available emissions allowances is capped and reduced each year to ensure that the EU climate targets will be met.

2 **Offsetting schemes:**

Offsetting relies on purchases of carbon credits generated by projects that reduce emissions in other sectors. The ICAO Carbon Reduction and Offsetting Scheme (CORSIA) requires airlines to offset any emissions from international flights between participating States above the 2019 threshold. This global approach ensures maximum efficiency whilst ensuring that potential market distortion is minimised.

In 2050, carbon removal projects (e.g. Carbon Capture Storage, afforestation) will become economically effective as a way to balance any remaining emissions. Destination 2050 assumes that by 2050, any economic measure used by aviation will rely exclusively on carbon removals, enabling it to effectively reach net zero CO_2 emissions.

Content Credit: Destination2050

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-37% · -111 Mt

IMPROVEMENTS IN AIRCRAFT AND ENGINE TECHNOLOGIES

By 2050, improvements in aircraft and engine technologies and subsequent fleet replacement hold the largest promise for reducing aviation's contribution to climate change.

NET ZERO

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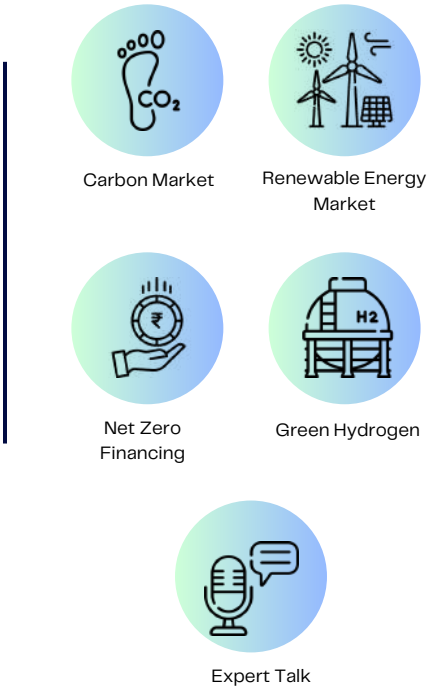
Content Credit: Destination2050

About Net Zero Wired

In an era marked by pressing climate concerns, the world is increasingly recognizing the urgent need for sustainable practices and renewable energy sources. Among the countries at the forefront of this global movement is India, a nation poised to revolutionize its energy landscape and embrace a net-zero future. Net Zero Wired, a groundbreaking digital platform, has emerged as a vital hub where India's sustainable ambitions and achievements converge.

Net Zero Wired serves as an all-encompassing platform, catering to the growing demand for knowledge, insights, and updates on net zero initiatives in India. With a multifaceted approach, the platform not only disseminates news and information but also features a captivating podcast that engages industry experts in thought-provoking discussions surrounding India's roadmap to a net-zero economy.

Net Zero Wired is a pioneering digital platform that plays a pivotal role in India's sustainable revolution. By providing a comprehensive and accessible resource, it empowers individuals, businesses, and policymakers with knowledge, insights, and updates on renewable energy, the carbon market, green hydrogen, and net-zero initiatives in India. With its engaging podcast series, the platform serves as a catalyst for inspiring conversations and collective action, driving India toward a greener and more sustainable future.



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