

Testwale Current Affairs PDF

Current Affairs search results for: "INDIA NET ZERO TARGET"

1. Inauguration of India's First 10MW Green Hydrogen Plant in MP (May 29, 2024)

Gas Authority of India Limited (GAIL) inaugurated its first Green Hydrogen (GH₂) Plant at Vijaipur complex in Madhya Pradesh (MP).

An Overview of the News

- The plant has a capacity to produce 4.3 tonnes per day (TPD) of hydrogen through a 10 MegaWatt (MW) Proton Exchange Membrane (PEM) Electrolyzer.
- The PEM Electrolyzer, with a capacity of 10 MW, has been imported from Canada.

Hydrogen Purity and Pressure:

- Hydrogen produced at this plant will have a purity of 99.99% by volume.
- It will be generated at a pressure of 30 kilograms per square centimeter (kg/cm²).

Investment and Goals:

- The 10 MW plant was built with an investment of Rs 231 crore.
- This initiative aligns with GAIL's target of achieving net-zero status by 2040 and the National Green Hydrogen Mission (NGHM)'s goal of reaching 5 million tons of annual green hydrogen production capacity for India by 2030.

Green Power Requirement:

- GAIL is also establishing around 20 MW solar power plants at Vijaipur, including both ground-mounted and floating installations, to fulfill the green power requirement for the 10 MW PEM Electrolyzer.

Gas Authority of India Limited (GAIL):

- It is a government-owned energy company.
- It focuses on natural gas trading, transmission and distribution.
- GAIL is involved in solar and wind energy, telecommunications (GAILTEL) and power generation.
 - Founded-**1984**
 - Headquarters - **GAIL Bhawan, New Delhi, Delhi, India**
 - Chairman & MD - **Sandeep Kumar Gupta**

2. India's first battery storage gigafactory to begin operations in Jammu and Kashmir (March 22, 2024)

GoodEnough Energy announced plans to begin operations at India's inaugural battery energy storage gigafactory in Jammu and Kashmir by October 2024.

An Overview of the News

- The facility aims to help industries cut carbon emissions by more than 5 million tonnes annually, in line with India's net zero emissions target by 2070.
- GoodEnough has invested 1.5 billion rupees (\$18.07 million) in a factory with 7 GWH capacity, with plans to invest another 3 billion rupees by 2027 to expand capacity to 20 GWH.
- These expansion plans were revealed by GoodEnough founder Akash Kaushik.

Importance of renewable energy:

- Battery energy storage projects are key to India's objective of expanding renewable energy capacity to 500 GW by 2030 from the current 178 GW.

Government Incentives:

- The Indian government is offering \$452 million in incentives to companies under a program aimed at promoting battery storage projects.

Role of battery storage systems:

- Battery storage systems facilitate the storage of energy from renewable sources, ensuring reliable and continuous energy supply.

Implications of Gigafactory establishment:

- The establishment of India's first battery storage gigafactory marks a significant progress towards achieving the country's renewable energy targets and reducing carbon emissions.
- The operations in Jammu and Kashmir are set to boost the renewable energy sector in India.

3. IREDA and Bank of Maharashtra partner to promote renewable energy adoption in India (Sept. 20, 2023)

IREDA (Indian Renewable Energy Development Agency) and the Bank of Maharashtra (BoM) entered into a partnership through a Memorandum of Understanding (MoU) in the renewable energy sector.

An Overview of the News

- The primary goal is to promote and facilitate co-lending and loan syndication for various renewable energy projects across India.
- The initiative supports India's efforts to reduce carbon emissions and transition to clean energy sources.
- The MoU was formally signed by **Bharat Singh Rajput, General Manager of Technical Services), IREDA, and Rajesh Singh, General Manager (Retail and MSME Credit), Bank of Maharashtra**, at IREDA's Business Center in New Delhi.

Sustainable Energy Infrastructure:

- The collaboration aims **to establish a strong financial infrastructure for green energy projects.**
- This infrastructure will increase access to clean and sustainable energy solutions for various communities and industries.

Alignment with government goals:

- This partnership underlines the importance of financial institutions and government bodies working together.
- This alignment supports India's ambitious target of achieving net zero emissions by 2070 as directed by the Honorable Prime Minister.
- The MOU includes a number of key services to support renewable energy projects:
 - Co-lending and co-origination assistance.
 - Loan Syndication and Underwriting Facility.
 - Management of trust and retention accounts for transparency.
 - Stable fixed interest rates for IREDA borrowings over 3-4 years.

IREDA Chairman and Managing Director - **Pradeep Kumar Das**

4. India's first-ever report on Critical Minerals for India unveils (June 30, 2023)

India's-first-ever-report-on-Critical-Minerals

Union Minister of Mines, **Pralhad Joshi** on 29th June **launched India's inaugural report on Critical Minerals for India.**

An overview of the news

- The report identifies **30 critical minerals** that are crucial for various sectors such as **defense, agriculture, energy, pharmaceuticals, and telecom.**

- This comprehensive list represents a significant milestone in India's efforts to achieve self-reliance and security in terms of mineral resources.
- The report aligns with India's vision of attaining '**Net Zero**' targets, emphasizing the importance of sustainable resource management.
- The purpose of the list is to provide guidance for policy formulation, strategic planning, and investment decisions within the mining sector.
- By identifying critical minerals, India aims to enhance its domestic production capabilities, reduce dependence on imports, and strengthen its mineral security.
- The report's findings will play a vital role in shaping India's mineral resource policies and facilitating long-term sustainability in key sectors of the economy.

What are Critical Minerals?

- Critical minerals are a specific group of minerals that play a vital role in various sectors of the **economy, including defense, energy, telecommunications, agriculture, and pharmaceuticals.**
- These minerals are essential for the production of **high-tech products, renewable energy technologies, advanced defense systems,** and other critical applications.
- Critical minerals possess unique properties and characteristics that make them difficult to substitute or replace with alternative materials.
- The identification and strategic management of critical minerals are crucial for ensuring the economic growth, security, and sustainability of a country's industries.

5. International Conference on Green Hydrogen to be held in New Delhi (June 28, 2023)

International-Conference-on-Green-Hydrogen-to-be-held-in-New-Delhi

The Government of India is hosting the **International Conference on Green Hydrogen (ICGH-2023)** from **5th to 7th July 2023 at Vigyan Bhawan, New Delhi.**

An overview of the news

- The conference provides a platform for stakeholders in the sector to explore the **evolving landscape of green hydrogen and innovative solutions.**
- Specific discussions on **hydrogen production, storage, distribution, and applications, the conference** will address topics such as green financing, upskilling of human resources, and startup initiatives in the sector.
- The conference will facilitate the sharing of international best practices and provide opportunities for learning from global experiences in the field of **Green Hydrogen.**

Objective of the Conference

- The primary objective of the conference is to **examine the establishment of a Green Hydrogen ecosystem** and promote a systemic approach to achieve global decarbonization goals through the **utilization of Green Hydrogen**.
- The conference aims to bring together global experts from the scientific and industrial communities to discuss the **latest advancements and emerging technologies in the field of green hydrogen**.

Organiser of the Conference

- It is organized by the **Ministry of New and Renewable Energy** in collaboration with the **Ministry of Petroleum and Natural Gas, Council of Scientific and Industrial Research**, and the **Office of Principal Scientific Advisor to the Government of India**.

National Green Hydrogen Mission

- The aim of the National Green Hydrogen Mission is to enable India to meet its climate change target of **net zero carbon emission by 2070** and make India a **production and export hub of hydrogen fuel**.

Aims of National Green Hydrogen Mission

- Achieve the capacity to produce **5 million tonnes of green hydrogen per year by 2030** ,
- Capacity addition of **125 GW of renewable energy by 2030**.
- Reduction in carbon dioxide emission of nearly **50 Million Metric Tonne per annum by 2030**.
- Reduction in fossil fuel imports worth **Rs 1 lakh crore by 2030**.
- To attract investment over **Rs.8 lakh crore in the sector**.
- Target of creation of over **6 lakh jobs in the sector by 2030**.

6. Sakhalin-1 Project (June 1, 2023)

Sakhalin-1-Project1

ONGC Videsh, a subsidiary of Oil and Natural Gas Corporation, recently said that oil production from the **Sakhalin-1 project in Russia** is back from **zero to a high of around 200,000 barrels per day (bpd)**.

An overview of the news

- ONGC expressed confidence that it would be able to retain its **20 per cent stake** in the Sakhalin-1 project.

- ONGC last year applied to the new Russian operator of Sakhalin-1 to retain its stake in the oil and gas project in the country's Far East.
- ONGC Videsh also has a **26% stake in Russia's Vankorneft**, a company that owns Vankor Field and the North Vankor licence.
- ONGC, which has set a **net zero target by 2038**, is expecting gas production from its **Mozambique project** to begin by 2026-27.

About Sakhalin-1 project

- The Sakhalin-1 project is an **oil and gas exploration and production project** located on the **northeastern coast of Sakhalin Island in Russia**.
- It is one of the largest foreign direct investments in Russia's energy sector.
- The Sakhalin-1 project is estimated to have significant oil and gas reserves.
- **Consortium:** The project is operated by Exxon Neftegas Limited, a subsidiary of ExxonMobil, in cooperation with other international partners, including Rosneft, ONGC Videsh Limited, and SODECO (a consortium of Japanese companies).
- **Technological Challenges:** The project faced numerous technological challenges due to its location in a remote and harsh environment.
- The offshore fields are located in the subarctic region, where ice and extreme weather conditions pose significant operational difficulties.
- **Socio Economic Impact:** The Sakhalin-1 project has had a significant socioeconomic impact on the region and Russia as a whole.
- It has contributed to job creation, infrastructure development, and technology transfer, stimulating economic growth in the area.
- **Future Expansion:** Additional exploration activities are being conducted to identify new reserves and expand production capacity.
- **Collaboration and Partnerships:** The Sakhalin-1 project serves as an example of successful international collaboration in the energy sector.
- It has brought together major international oil companies and Russian partners to leverage their expertise, resources, and technology.

About ONGC Videsh

- ONGC Videsh Limited is a **Miniratna Schedule "A" Central Public Sector Enterprise (CPSE)** of the Government of India under the administrative control of the **Ministry of Petroleum and Natural Gas**.
- It is a wholly owned subsidiary and overseas arm of **Oil and Natural Gas Corporation Limited (ONGC)**.
- ONGC Videsh Limited's primary business is to explore possibilities for **oil and gas production outside India**, including exploration, development and production of oil and gas.

7. India to join international climate action in civil aviation from 2027 (May 1, 2023)

India will join the International Civil Aviation Organization (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) and Long-Term Aspirational Goals (LTAG) from 2027.

An Overview of the News

- This announcement was made in the meeting of the **Consultative Committee of the Parliament of the Ministry of Civil Aviation** under the **chairmanship of Minister Jyotiraditya Scindia**.
- ICAO has adopted several key ambitious targets, including a **two percent annual fuel efficiency improvement by 2050, carbon neutral development, and net zero by 2050, all covered under CORSA and LTAG**.
- India's Ministry of Civil Aviation stated that joining these measures from 2027 would help airlines from developing countries like India to achieve greater growth and avoid adverse **financial consequences due to CORSA**.
- The financial impact caused by offsetting will be borne by individual airlines based on their international operations, and CORSA only applies to flights originating from one country to another.

International Civil Aviation Organization (ICAO):

- It is a **specialised agency of the United Nations** and its primary function is to **coordinate the principles and techniques of international air navigation**.
- The organisation is also responsible for promoting the **planning and development of international air transport**.
- ICAO's mission is to ensure the **safe and orderly development of the international aviation industry**.
- The organisation works with its member states to **develop and implement policies and regulations related to air navigation and air transport**.
- ICAO also provides technical assistance and training to help its member states meet international aviation standards and regulations.

Established - **7 December 1944**

Headquarters - **Montreal, Canada**

Carbon Offsetting and Mitigation Scheme for International Aviation (CORSA):

- It is a global plan developed by the **International Civil Aviation Organization (ICAO)** to **reduce CO2 emissions from international flights**.

- It aims to achieve **carbon-neutral growth for international flights** by offsetting any increase in emissions through the purchase of carbon credits from eligible projects.
- The plan has a phased implementation and includes all international flights, except to **least developed countries, small island developing states and landlocked developing countries.**

8. Australia to host third in-person Quad summit (April 26, 2023)

Australia will host the **third in-person Quad summit in Sydney on 24 May.**

An Overview of the News

- The Quad Summit will be attended by the leaders of the four member countries – **US President Joe Biden, Japanese PM Fumio Kishida, Indian Prime Minister Narendra Modi and Australian Prime Minister Anthony Albanese.**
- The Quad summit is a meeting between the leaders of four countries: **the United States, Japan, India, and Australia.**
- The Quad was **first established as a strategic dialogue in 2007**, but remained **dormant for several years until it was revived in 2017.**
- The Quad Summit, to be held in **Washington DC in September 2021**, was the **first in-person meeting of the Quad leaders.**
- The agenda of the Quad summit focused on four key areas: **COVID-19 vaccine delivery, climate change, critical and emerging technologies and regional security.**
- The Quad leaders announced a new initiative **to boost COVID-19 vaccine production in India** with a target of distributing **one billion doses to the Asia-Pacific region by the end of 2022.**
- On the subject of climate change, the Quad leaders pledged to work together **to achieve net-zero emissions by 2050.**

About Australia

It is a **sovereign country located in the Southern Hemisphere** and is **geographically isolated** from the rest of the world.

Capital - **Canberra**

Government - **federal parliamentary constitutional monarchy**

Emperor - **Charles III**

Governor-General - **David Hurley**

Prime Minister - **Anthony Albanese**

9. PFC sanctions Rs 663 crore loan to Gensol Engineering for purchase of Electric Vehicles (April 21, 2023)

Power Finance Corporation (PFC), a **Maharatna company and NBFC** in the Indian power sector has **sanctioned a loan of Rs 633 crore to Gensol Engineering**, for the **purchase of 5000 passenger Electric Vehicles (EVs) and 1000 cargo EVs.**

An overview of the news

- The passenger EVs will be leased to **Blusmart Mobility Pvt Ltd (BMPL)** to expand its fleet of ride-hailing cabs.
- The first tranche of the loan has been disbursed, and the **first lot of EV cabs has hit the roads of Delhi.**
- **5000 Passenger E4W (Electric Four-Wheelers)** funded by PFC are being deployed in Delhi and will **result in CO2 emission reduction.**
- With a view to accelerate **India's net-zero target**, PFC is exploring opportunities in debt financing of EVs (OEMs and Fleet Acquisition), battery OEMs and EV charging infrastructure, apart from large scale renewable energy financing.

Power Finance Corporation Ltd (PFC)

- It plays an important role in the power sector and is **responsible for electricity management.**
- Established - **in 1986**
- It falls under the **ownership of the Ministry of Power** and has achieved the status of **Maharatna from Navratna on 12th October 2021.**

10. Indian Railways to become Net Zero Carbon Emitter by 2030 (March 17, 2023)

"net zero carbon emitter" by 2030.

Union Railway Minister **Ashwini Vaishnav** recently said in a written reply to a question in the Lok Sabha that the Indian Railways is working on a mission mode to become the largest green railway in the world and towards becoming a **"net zero carbon emitter" by 2030.**

An overview of the news

- **Indian Railways** has taken several initiatives to reduce carbon emissions which include the use of energy efficient technologies.
- Indian Railways is starting production of three phase electric locomotives with regenerative features, use of Head on Generation (HOG) technology, use of LED lights in buildings and coaches, use of star rated equipment.

- In addition, key strategies identified to achieve the net zero carbon emission target are
- procurement of electricity through renewable energy sources, transition from diesel to electric traction, promotion of energy efficiency, and afforestation.

The projected energy demand of Indian Railways

- The estimated energy demand of **Indian Railways** is expected to be around **8,200 Megawatts (MW) in 2029-30**.
- To achieve net zero carbon emissions, the **expected requirement of renewable capacity by 2029-30** would be **around 30,000 MW**.
- By **February 2023**, about **147 MW of solar plants** and about **103 MW of wind power plants** have been commissioned.
- In addition, **about 2150 MW** of renewable capacity has also been tied up.
- Indian Railways plans to progressively procure renewable energy through various power purchase modes for its future energy requirements.

Contribution of railways towards combating Climate Change

- Indian Railways has adopted an integrated approach to green transport to increase the total share of Indian Railways in land based freight traffic from the **present 36 per cent to 45 per cent by 2030**.
- Indian Railways is setting up **Dedicated Freight Corridors (DFCs)** across the country.
- Its first phase is estimated to reduce emissions by about **457 million tonnes** over a period of 30 years.
- The **traction diesel fuel** will use **5 percent blending of biofuels**.
- Water use efficiency will be improved by **20 percent by 2030**.
- Plantation will be done to increase carbon absorption, there will be emphasis on waste management and pollution control.
- The Minister of Railways - **Ashwini Vaishnaw**