Year End Review 2023 of Ministry of New & Renewable Energy

About 13.5 GW renewable energy capacity added during calendar year 2023

India, 4th globally in Renewable Energy Installed Capacity, 4th in Wind Power capacity and 5th in Solar Power capacity

“Offshore Wind Energy Lease Rules, 2023” notified to regulate allocation of offshore wind sea blocks to developers

India announces definition of Green Hydrogen; process initiated under National Green Hydrogen Mission for setting up 4.5 lakh tonnes of Green Hydrogen Production Facilities in India

49 lakhs pumps to be installed / solarized as per revised targets under Component B and C of PM KUSUM

I. Overview

- In line with the Prime Minister’s announcement at COP26, Ministry of New and Renewable Energy is working towards achieving 500 GW Non-Fossil based electricity generation capacity by 2030.
- RE capacity of about 13.5 GW is expected to be installed during calendar year 2023, corresponding to an investment of about ₹ 74,000 crores.

II. National Green Hydrogen Mission
The Ministry of New and Renewable Energy is implementing the National Green Hydrogen Mission, approved by the Union Cabinet on 4th January 2023, with an outlay of ₹ 19,744 crore. The overarching objective of the Mission is to make India the Global Hub for production, usage and export of Green Hydrogen and its derivatives.

- A Working Group being chaired by Secretary, MNRE for establishment of a framework of Regulations, Codes and Standards for Green Hydrogen, shared the first set of recommendations of the Working Group with Ministry of Road Transport and Highways, Ministry of Consumer Affairs, Department for Promotion of Industry and Internal Trade and Ministry of Petroleum & Natural Gas on 8th May 2023.

- **The Strategic Interventions for Green Hydrogen Transition (SIGHT) Programme**, is a major financial measure under the Mission with an outlay of ₹ 17,490 crore. The programme consists of two distinct financial incentive mechanisms to support domestic manufacturing of electrolysers and production of Green Hydrogen.
  - Request for Selection (RfS) has been issued for Selection of Green Hydrogen Producers for Setting up Production Facilities of 450,000 tons for Green Hydrogen in India under the Strategic Interventions for Green Hydrogen Transition (SIGHT) Scheme (Mode-I-Tranche-I).
  - Request for Selection (RfS) has been issued for the Selection of Electrolyser Manufacturers (EM) for Setting up 1.5 GW annual Electrolyser Manufacturing Capacities under SIGHT Scheme (Tranche-I).

- The Ministry of New & Renewable Energy in collaboration with Ministry of Petroleum & Natural Gas, Council of Scientific & Industrial Research and office of Principal Scientific Adviser organized the International Conference on Green Hydrogen (ICGH – 2023) from 5th – 7th July 2023 at Vigyan Bhawan, New Delhi. The conference featured 7 plenary talks each from a different region’s perspective. In addition to the Plenary sessions, the conference hosted 19 Panel Discussions and Technical Sessions. It was attended by more than 2700 delegates from over 10 countries from the industry, academia and Government. An expo was also organized at the venue to demonstrate the innovations in use of Hydrogen. On the sidelines, country roundtables were also organized with Europe, Japan, Singapore and Korea, which saw deliberations between representatives of these countries and Indian Green Hydrogen industry.

  Read: Three-day International Conference on Green Hydrogen (ICGH) 2023 Concludes in New Delhi

- The Green Hydrogen standard for India has been notified on 19th August 2023, outlining the emission thresholds to be met in order for hydrogen produced to be classified as ‘Green’, i.e., from renewable sources.

  Read: India announces definition of Green Hydrogen

- The Research & Development Roadmap for the National Green Hydrogen Mission has been unveiled on 7th October 2023.

- The Green Hydrogen page on ‘The National Single Window System (NSWS) of Government of India’ was unveiled on 7th October 2023, to provide a single window to industry for obtaining all approvals related to projects under the National Green Hydrogen Mission.

**III. Green Energy Corridor - Inter-State Transmission System for 13 GW RE Projects in Ladakh**
MNRE plans to set up 13,000 MW RE along with 12000 MWh Battery Energy Storage System (BESS) in Ladakh.

On 18.10.2023, the Cabinet Committee on Economic Affairs approved construction of an Inter-State Transmission System for power evacuation and grid integration of the 13 GW RE projects in Ladakh and despatch of power from the U.T. of Ladakh to other parts of the country.

Read: Cabinet approves Green Energy Corridor (GEC) Phase-II – Inter-State Transmission System (ISTS) for 13 GW Renewable Energy Project in Ladakh

The project will also ensure reliable power supply to the Ladakh region as well as Jammu & Kashmir.

Currently, POWERGRID (the implementing agency for the project) is carrying out the Front End Engineering Design (FEED) study. The report of the study is expected by December 2024. Based on the study’s report, bids for construction will be invited by POWERGRID.

IV. PLI Scheme for High Efficiency Solar PV Modules

The Government of India is implementing the Production Linked Incentive (PLI) Scheme for National Programme on High Efficiency Solar PV Modules, for achieving manufacturing capacity of Giga Watt (GW) scale in High Efficiency Solar PV modules.

Under Tranche-II with an outlay of Rs 19,500 crore, Letters of Award have been issued in April, 2023 for setting up 39,600 MW of fully / partially integrated solar PV module manufacturing units.

Production has started in the thin film solar PV module manufacturing capacity set up by FS India Solar Ventures Private Limited at Sriperumbudur, Kanchipuram District, Tamil Nadu. Production of solar PV modules has started in manufacturing capacities set up by ReNew Photovoltaics Private Limited at Mahindra World City, Jaipur, Rajasthan; Grew Energy Private Limited at Dudu, Jaipur, Rajasthan; and TP Solar Limited at Gangaikondan, Tirunelveli, Tamil Nadu.

V. Offshore Wind Energy

India is blessed with a coastline of about 7600 km (Mainland) surrounded by water on three sides and has good potential for offshore wind energy generation. Initial assessment of offshore wind energy potential within the identified zones has been estimated to be about 70 GW off the coast of Gujarat and Tamil Nadu.

A revised Strategy for development of offshore wind energy projects has been issued in September, 2023, indicating a bidding trajectory for installation of 37 GW capacity of Offshore Wind Energy. Further, Central Transmission Utility has completed the planning of required transmission infrastructure for offshore wind projects for initial 10 GW offshore capacity (5 GW each off Gujarat and Tamil Nadu coasts).

The “Offshore Wind Energy Lease Rules, 2023” to regulate the allocation of offshore wind sea blocks to developers have been notified on 19.12.2023.

Govt. of Gujarat and Govt. of Tamil Nadu have agreed for power offtake @ Rs. 4.00 per unit from initial offshore wind energy projects from their respective coasts.

VI. Solar Parks

The Scheme for “Development of Solar Parks and Ultra Mega Solar Power Projects” was rolled out in December 2014, with aggregate capacity 20,000 MW. Further, the capacity of the
Solar Park Scheme was enhanced from 20,000 MW to 40,000 MW in March 2017 by 2025-26.
- As on 30-11-2023, Ministry has approved 50 solar parks with an aggregate capacity of around 37,490 MW in 12 States across the country.
- In these approved parks, an aggregate capacity of 10,401 MW of solar projects has been commissioned, out of which 284 MW has been commissioned in the calendar year of 2023.

VII. PM KUSUM
- The Government approved the expansion of PM KUSUM Scheme with revised targets of 49 lakhs pumps to be installed / solarized under Component B and C of the Scheme.
- The Guidelines of the scheme have been revised to simplify the land aggregation process in Component ‘C’.
- The Ministry has issued empaneled list of vendors and Benchmark Cost under Component ‘B’ during July and September, 2023, respectively.
- The Scheme has been amended with removal of mandatory State share provision, vide OM dated 20.11.2023.

VIII. Rooftop Solar
- About 741 MW capacity has been installed under the grid connected rooftop solar programme during January to November 2023. An additional approximately 2.77 GW capacity has been installed in all sectors with or without Central Financial Assistance during this period.

IX. Bioenergy
- Initiative was undertaken for spreading the message of not burning biomass and using it for Bioenergy conversion, in 20 districts of Punjab, Haryana and Uttar Pradesh through BioCNG driven Vans.
- 105 MWeq capacity of Bioenergy Projects (Biomass and Waste to Energy projects) was installed during the year.
- 12,693 small Biogas Plants & 1.107 Mweq (medium size biogas plants) were installed. Annual target of 46,000 number of small biogas plant installation was allocated during the FY 2023-24 to the designated Programme Implementing Agencies of states.
- Briquette/Pellet projects with capacity more than 180 TPH (Tonnes per Hour) has been installed.

X. Annual Bidding Trajectory
- MNRE has prescribed an annual bidding trajectory for RE power bids to be issued by Renewable Energy Implementation Agencies (REIAs).
- Bids for 50 GW per annum RE capacity, with at least 10 GW per annum Wind power capacity, are to be issued each year from 2023-24 to 2027-28.
- Bids of 35.51 GW have been issued by four REIAs (SECI, NTPC, NHPC & SJVN) in FY 2023-24 till 31.12.2023.
XI. **Renewable Purchase Obligation (RPO)**

- Government of India has notified the renewable purchase obligation (RPO) targets for designated consumers up to March 2030 under the Energy Conservation Act, 2001.
- The minimum share of renewable energy is set to progressively increase over the years. In 2024-25, 29.91 per cent of the total energy must come from renewable energy sources. This will gradually rise to 43.33 per cent in 2029-30.
- Separate RPO for 'distributed renewable energy (DRE)' has been introduced.
- The new trajectory represents a significant step towards a greener and more sustainable energy landscape and will help entities in long-term planning.

XII. **Rising Stature of IREDA**

- The Reserve Bank of India (RBI) has granted an ‘Infrastructure Finance Company (IFC)’ status to IREDA on 13.03.2023.
- On 1.09.2023, DIPAM communicated the approval of the Alternative Mechanism, for Initial Public Offer (IPO) of IREDA for 40,31,64,706 fresh equity shares along with 26,87,76,471 of shares through Offer for Sale (OFS) by GoI in a piggyback manner.
- Initial Public Offer (IPO) of IREDA got successfully completed by issuance of approx. 67.19 crore equity shares of face value of ₹10 each at a price of ₹32 per equity share (including a premium of ₹22 per equity share). The public subscription opened on 21st November, 2023 and closed on 23rd November, 2023. The IPO received overwhelming response from the investors. The issue was overall subscribed a strong 38.80 times during the three-day bidding process. The portion for qualified institutional bidders (QIBs) witnessed a massive 104.57 times subscription, while the portion reserved for non-institutional investors saw 24.16 times bidding. The shares of the company got listed on both NSE and BSE on 29th November 2023 with listing price at approx. 56% hike in the pre-open trading debut and closed at an upper circuit of ₹ 60 per share. As on 29th December 2023 the stock is listed at ₹102.20 on NSE. Post IPO, the stake of Government of India in IREDA stands at 75% of post-offer paid-up equity share capital. The IPO proceeds shall be utilized by the company for capital augmentation and on-lending.
- IREDA has been upgraded from 'Schedule B' to 'Schedule A' category CPSE and the same has been notified vide MNRE vide OM dated 29th September 2023.
- The credit rating agency India Ratings has upgraded the debt instruments rating of the IREDA to ‘AAA’ (Outlook: Stable) from ‘AA+’ (Outlook: Positive). Earlier, in March 2023, ICRA had also upgraded IREDA’s ratings to 'AAA' (Outlook: Stable) from 'AA+' (Outlook: Positive). The ratings reflect a continuous improvement in IREDA’s credit profile in terms of asset quality, provisioning coverage and franchise growth.
- IREDA had sanctioned and disbursed loan of Rs.25,743.06 crore (provisional) and Rs.23,510.69 crore (provisional) respectively during 1st January, 2023 to 31st December, 2023.

XIII. **International Renewable Energy Agency Presidency**

- India assumed the Presidency of the 13th Assembly of The International Renewable Energy Agency (IRENA), the first international organisation to focus exclusively on Renewable Energy, in the meeting held on 14-15 January, 2023 in Abu Dhabi.
XIV. **G20 Energy Transitions Working Group and Energy Transitions Ministerial Meeting**

- Under India’s G20 Presidency, Ministry of New and Renewable Energy participated in the discussions and negotiations under the Energy Transitions Working Group (ETWG), one of thirteen Working Groups under the Sherpa track, which discusses energy security, accessibility and affordability, energy efficiency, renewable energy, innovation, technology, and funding.
- To deliberate and identify actions in priority areas, 4 ETWG meetings were organized during February to July 2023. The meetings were attended by around 150 delegates from G20 member countries, special invitee countries, and international organizations such as IEA, IRENA, World Bank, ADB, CEM-MI, UNIDO, UNEP and WEF. The discussions centered around critical challenges related to climate change, sustainability, energy security, equitable energy access and financing, in the context of global energy transitions. The meetings emphasized the urgent need for feasible, collaborative, and accountable policy actions to accelerate global energy transitions while ensuring universal energy access and just, affordable, and inclusive energy transitions in line with achieving Sustainable Development Goals (SDGs).
- The fourth ETWG meeting was followed by the Energy Transitions Ministerial Meeting (ETMM) in Goa, where the G20 Energy Ministers met under India's G20 Presidency on July 22, 2023 to finalise the outcomes of the Energy Transitions Working Group of G20. Energy Ministers of all G20 member countries attended the meeting physically or virtually. In the ETMM, the G20 Energy Ministers adopted an ambitious and forward-looking Outcome Document and Chair's Summary of the meeting, including G20 High-Level Voluntary Principles on Hydrogen. Following the ministerial meeting in July, the ETMM Outcome document and Chair summary was released, which also included "G20 High Level Voluntary Principles on Hydrogen".
- The major priority areas related to Renewable energy being pursued by MNRE during the ETWG under India’s G20 presidency have all been included in the G20 Leaders Declaration.

XV. **6th Assembly of International Solar Alliance**

- The 6th Session of the ISA Assembly was held on October 31, 2023 at Bharat Mandapam, Pragati Maidan. The Assembly was presided over by Hon'ble Minister of New & Renewable Energy and Power in his capacity as President ISA.
- The Assembly saw participation from 121 countries, 20 partner organizations and 09 special invitees. 20 Ministers and 8 Vice Ministers participated in the meeting. One of the important outcomes was the confirmation of voluntary contribution by more than 05 member countries.