ENERGY and CLIMATE WATCH

October 2023

We welcome you to the October, 2023 edition of our monthly newsletter on energy and climate change. It consists of significant development in India's energy and climate change space and worldwide.

Switching from energy systems based on fossil fuels to renewables is vital to lessen reliance on the unpredictable fossil fuel market and combat climate change. Additionally, renewable energy can increase employment across all regions, mainly rural areas. It is essential to emphasise India's enormous renewable energy potential to attract international investments and start the Green Energy Revolution. However, comprehensive policy and regulatory framework assistance is required for the renewable sector. The push from industry is also necessary to adopt new technologies and rapidly transition to a non-fossil-based energy ecosystem

Similarly, we are also focusing on the issue of climate change in this edition. India's high population density, large spatial and temporal variability in rainfall, and high poverty rates make it particularly vulnerable to the impacts of climate change. There has been an increase in the national mean surface air temperature and the number of hot days, significant regional variations in rainfall patterns, measurable melting of Himalayan glaciers, and rising sea levels. India will need better climate adaptability models to predict impacts on state and region, a prerequisite for informed adaptation policy.

Additionally, the newsletter captures power statistics for October 2023 to update the reader on the developments in the power sector. CUTS International organised a roundtable dialogue on 'Electrifying the Medium and Heavy Duty Vehicle Industry' in Jaipur on October 19, 2023. A brief of this event is discussed in the CUTS AT WORK section

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1. Gujarat Notifies Renewable Energy Policy 2023

The Government of Gujarat has notified the Renewable Energy Policy 2023 to encourage the setting up of renewable generation projects based on wind, solar, and wind-solar hybrid technologies.

This Renewable Energy Policy 2023 is formulated to provide a simplified framework for the ease of developing renewable projects in the state by attracting investments in the renewable sector.

What is it about?

Gujarat, in its Renewable Energy Policy 2023, has set the target of achieving 50 percent of its electric power capacity from non-fossil fuels by 2030, supported by investments of ₹5 lakh crores and the utilisation of 4,00,000 acres of land. Gujarat Energy Development Agency (GEDA) will act as the nodal agency for project registration, validation, commissioning certificate, and monthly progress report. While implementation, coordination, and monitoring will be done by Gujarat Urja Vikas Nigam Limited (GUVNL).With this policy the state is set to dig deeper into the renewable energy sector.

The objective of the policy is to encourage better resource utilisation for enabling cost-effective and reliable power supply to consumers through large-scale adoption of renewable energy and to ensure a smooth transition to a clean energy regime by deriving synergistic value streams through wind-solar hybrid projects. The policy is aimed at ensuring energy security and supporting the economic development of the state, which will not only lessen the state's carbon footprints but also contribute to society through the supply of renewable power to consumers in other states. The policy seeks to attract participation from a wide range of stakeholders, including industries, the Ministry of Micro, Small, and Medium-sized Enterprises (MSMEs), organisations, and consumers.

The ultimate goal of the policy is to reduce carbon emissions, enhance energy security, generate employment, stimulate local manufacturing and startups, and improve energy efficiency through awareness initiatives. The policy will remain applicable until September 2028.

Read in detail here

2. MoEFCC Notifies Green Credit Programme and Ecomark Scheme

The Ministry of Environment, Forest and Climate Change has introduced two pioneering initiatives that indicate the country's pro-active approach to climate change, sustainability, and promoting eco-conscious practices.

These initiatives, the Green Credit Programme (GCP) and the Ecomark Scheme seek to encourage environmentally friendly practices rooted in tradition and conservation, reflecting the ideas of the Lifestyle for the Environment (LiFE) concept.

What is it about?

The GCP is an innovative market-based mechanism designed to incentivise voluntary environmental actions across diverse sectors by various stakeholders like individuals, communities, private sector industries, and companies. The GCP's governance framework is supported by an inter-ministerial steering committee, and the Indian Council of Forestry Research and Education (ICFRE) serves as the GCP Administrator, responsible for programme implementation, management, monitoring, and operation.

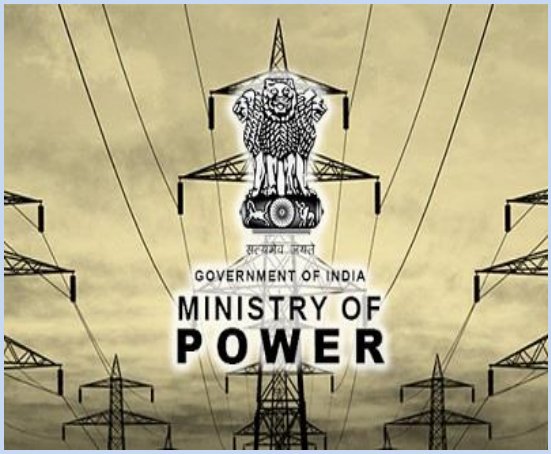
In its initial phase, the GCP focuses on two key activities: water conservation and afforestation. Draft methodologies for awarding green credits have been developed and will be notified for stakeholder consultation. These methodologies set benchmarks for each activity or process to ensure environmental impact and fungibility across sectors.

The Ecomark Scheme provides accreditation and labelling for household and consumer products that meet specific environmental criteria while maintaining quality standards as per Indian norms. Products accredited under the Ecomark Scheme will adhere to specific environmental criteria, ensuring minimal environmental impact. It will build consumer awareness of environmental issues and encourage eco-conscious choices. It will also motivate manufacturers to shift towards environmentally friendly production. The scheme seeks to ensure accurate labelling and prevent misleading information about products.

Both initiatives mark significant steps in promoting sustainable living, environmental conservation, and, through individual and collective choice, embodying eco-friendly practices in India.

Read in detail

3. Ministry of Power Approves Implementation of Uniform Renewable Energy Tariff



The Ministry of Power has granted approval of procedure for the implementation of a Uniform Renewable Energy Tariff (URET) exclusively for end power procurers, including distribution companies (discoms) and open-access consumers connected to Inter-State Transmission Systems URET will standardise pricing for renewable energy projects within the central pool, streamlining the procurement process for end users.

What is it about?

The approved procedure has introduced a set of rules that outline a structured framework for various central pools, each designed to accommodate specific renewable energy sources. These categories include solar power, wind power, hydropower, solar-wind hybrid, round-the-clock power (solar-wind hybrid + storage), peaking power (solar-wind hybrid + storage), and firm and dispatchable renewable energy (RE) power.

Each central pool will have a duration of five years, during which all capacity covered by Power Supply Agreements (PSAs) signed within this period will become part of the central pool. Once the five-year term concludes, no new capacity will be incorporated, but the existing capacity will remain within the pool until the expiration of their respective agreements.

The Uniform Renewable Energy Tariff (URET) will solely be applicable to end procurers for their contracted capacity, without affecting the tariff determined via competitive bidding, which is payable to renewable energy generators through the Intermediary Procurer. To ensure adherence to these regulations, Intermediary Procurers must integrate appropriate provisions into their bidding documents, Power Purchase Agreements (PPAs), and PSAs. This framework seeks to establish a robust and transparent system for managing renewable energy resources.

Read in detail

4. India-Saudi Arabia to Cooperate on Electrical Connectivity, Green Hydrogen and Supply Chains

India and Saudi Arabia have signed a Memorandum of Understanding (MoU) in Riyadh in the fields of electrical interconnections, green and clean hydrogen, and supply chains.

This MoU aims to establish a general framework for cooperation between the two countries in the fields of electrical interconnection, exchange of electricity during peak times and emergencies, co-development of projects, co-production of green and clean hydrogen and renewable energy, and also establishing secure, reliable, and resilient supply chains of materials used in green and clean hydrogen and the renewable energy sector.

What is it about?

An MoU has been signed to establish the framework for cooperation between India and Saudia in the domain of electrical interconnection. The primary objectives include facilitating the exchange of electricity during peak periods and emergencies, jointly developing projects related to green and clean hydrogen, along with renewable energy, and creating secure, dependable, and resilient supply chains for materials essential to the green and clean hydrogen, as well as renewable energy sectors. It should also be noted that this cooperative effort will strictly adhere to the respective capabilities and relevant laws and regulations of both countries.

The memorandum covers various aspects of cooperation, such as conducting important studies for electrical connections, working together on green and clean hydrogen projects and renewable energy efforts, partnering with specialised entities and companies in electrical connections and green hydrogen, creating electrical links, and setting up a joint approach for developing green hydrogen and renewable energy.

Additionally, the MoU strives to ensure the establishment of secure, reliable, and resilient supply chains for materials crucial to the green/clean hydrogen and renewable energy sectors.

Read in Detail

5. IRENA Report Calls for Tripling Renewable Power and Doubling Energy Efficiency by 2030

The COP28 Presidency, in collaboration with the International Renewable Energy Agency (IRENA) and the Global Renewables Alliance (GRA), released a joint report at the Pre-COP event in Abu Dhabi, aiming to triple global renewable energy capacity to at least 11,000 GW and double annual energy efficiency improvements by 2030.

The report offers concrete policy recommendations to both governments and the private sector. This initiative aligns with the COP28 Presidency's Action Agenda objective of accelerating a just and orderly energy transition while keeping the 1.5 °C target within reach.

What is it about?

The central focus of the report is to provide governments and the private sector with practical policy recommendations. It highlights the dire need to significantly increase global renewable energy capacity to at least 11,000 GW while simultaneously doubling annual improvements in energy efficiency.

The report classifies key factors essential for achieving these ambitious goals into five categories, which encompass infrastructure and system operation, policy and regulation, supply chain, skills and capacities, scaling-up finance (both public and private), and promoting international collaboration. Tripling commitments to renewable energy and doubling efforts in energy efficiency are formidable steps in combating climate change. These initiatives are expected to result in cleaner electricity systems, improved access to affordable energy, and the generation of sustainable job opportunities.

The collaboration between the COP28 Presidency, IRENA, and the GRA reflects the growing consensus on the necessity of achieving these targets. As part of their commitment to these global objectives, the Presidency and the European Commission have called upon countries to support the Global Renewables and Energy Efficiency Pledge, with several Champion countries already pledging their support to these critical targets.

Read in detail

6. International Social Alliance Increases Viability Gap Funding for Solar Projects

The International Solar Alliance (ISA) in its sixth assembly announced the decision to increase the viability gap funding cap for solar projects from 10 to 35 percent of the project cost.

The assembly of the ISA is an apex decision-making body in which each of the 116 member countries is represented. The assembly meets every year at ISA's seat to measure the effect of its solar programmes in terms of performance, reliability, cost, scale of finance, etc.

What is it about?

This move is aimed at promoting solar adoption in developing and underdeveloped nations. Through its VGF mechanism, the ISA offers a grant of $150,000 or 10 percent of the project cost, whichever is lower, per country per project. The Assembly has now extended this range to 35 percent of the project cost, (whichever is lower), per country per project, taking into account the capacity and requirements of the countries and their respective projects. This will enable more investments to flow into Africa.

India's regulatory framework, which has facilitated the growth of solar energy, was highlighted, with the hope that other nations would emulate India's efforts. According to government data, India currently possesses a solar capacity of 67.078 GW, constituting 16.1 percent of the country's total capacity, with plans to increase this to 292 GW by 2030.

The establishment of the ISA in 2015 and its subsequent expansion have positioned India as a leader in the renewable energy sector, aspiring to represent the voice of the Global South.

Read in detail

7. Ministry of Power Unfolds a New Renewable Roadmap for 2030

The Ministry of Power and the Bureau of Energy Efficiency announced a revision to the Energy Conservation Act of 2001, setting ambitious renewable energy consumption benchmarks for specified consumers until the financial year ending 2030.

According to the notification, the BEE will shoulder the responsibility of data management. The Bureau will be renewable energy utilisation by the designated consumer(s) to the Central Government.

What is it about?

The notification states that from April 2024, energy derived from wind power projects initiated after March 31, 2024, along with energy from hydropower projects, including pump storage and small hydro projects post-this date, will be the focal point. Moreover, the Central Government could potentially approve energy sourcing from hydroelectric renewable projects abroad.

The notification provides a clear roadmap for the gradual increase in the share of renewable energy in the energy consumption mix. For the fiscal year 2024-25, the minimum share of renewable energy is set at 29.91 percent, with wind energy accounting for 0.67 percent, hydro energy at 0.38 percent, distributed renewable energy at 1.50 percent, and other renewable sources at 27.35 percent. These figures are expected to progressively rise in the coming years, reaching 43.33 percent by the fiscal year 2029-30.

It also highlights the significance of distributed renewable energy, specifically emphasising projects with a capacity of less than 10 MW, which includes a range of solar installations. To address potential annual shortfalls in renewable energy consumption, the guidelines provide a practical solution, allowing any excess consumption in other renewable energy sources to offset deficits in wind or hydro energy consumption.

Furthermore, the notification mandates that specified consumers, whether involved in open access or operating captive power plants, must meet renewable energy targets. Non-compliance with these regulations will result in penalties, as stipulated by Section 26 of the Act, emphasising the government's unwavering commitment to achieving renewable energy goals and sustainability.

Read in detail

CUTS AT WORK

CUTS International organised a roundtable dialogue on 'Electrifying the Medium and Heavy Duty Vehicle Industry' in Jaipur, on October 19, 2023. Various researchers and industry experts gathered to address the need for electrifying the medium- and heavy-duty vehicle industry.

"Freight vehicles returning empty after offloading the goods reduces the efficiency of the freight sector, a key concern towards the transition towards electric mobility," said Deb Mukherji Adviser, Omega Seiki Mobility. Anshuman Gothwal, Co-founder and Director, Centre for Energy, Environment & People expressed concerns about the absence of standard protocols in the EV industry, especially regarding safety and capacity building.

The regulatory perspective of the transition towards electric vehicles (EVs) and the need for innovation within original equipment manufacturers to facilitate the transition to EVs was discussed by Harsimran Kaur from International Council on Clean Transportation.

Neha Sakka, Junior Engineer, JVVNL emphasised the need for standardisation in EV charging infrastructure and proposed a Rajasthan Portal to bridge information gaps. Himanshu Tyagi, Senior Research Analyst, World Resources Institute spoke on timely upgrades in charging infrastructure for Heavy Duty Vehicles and Medium Duty Vehicles, highlighting the importance of energy-efficient policies.

Rohit Garg, Programme Officer, Centre for Science and Environment discussed challenges in scaling up battery research, and Dhwaj, Researcher, Indicc identified drawbacks in battery-based EVs, including low energy density, battery disposal issues, and longer charging times compared to internal combustion engine vehicles.

Read in detail here: ***https://tinyurl.com/4dpyzt9b***

Power Statistics for October 2023									
Installed capacity (GW)	Thermal		RE (including large hydro)		Thermal power penetration in the generation mix	RE power penetration in the generation mix	Peak demand (GW)	Peak demand met (GW)	Shortage
	Capacity (GW)	As a % of the total installation	Capacity (GW)	As a % of the total installation					
425.41	239.3	56.25	178.63	42.0	72.33%	24.08 %	240.17	239.97	0.1%

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