ENERGY and CLIMATE WATCH

August 2023

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

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 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 states and regions, a prerequisite for an informed adaptation policy.

Additionally, the newsletter captures power statistics for August 2023 to update the reader on the developments in the power sector. CUTS International organised a webinar in August 2023 on 'The G20 Championing the Consumer Movement.' A brief of the webinar is discussed in the CUTS AT WORK section.

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1. Rajasthan Notifies Draft Energy Policy, 2050

The Energy Department of Rajasthan has notified the draft Rajasthan Energy Policy 2050 to install 90 GW of renewable energy capacity by 2030, including 5.5 GW from residential rooftop solar.

It also targets 100 percent compliance with National Renewable Purchase Obligations, reducing discoms' AT&C losses to 12-15 percent by 2025-26. By 2050, the state aims to generate 70 percent of its electricity from non-fossil fuels and reduce distribution losses below 10 percent. It will also employ a workforce of 110,000 people with varying skill requirements for business development, project design, construction and commissioning, and operations and maintenance.

What is it about?

The draft policy has two economy-wide and 14 sectoral milestones to be achieved by 2050. It outlines specific targets, such as a 60 percent reduction in energy intensity and a 700 million tonnes reduction in carbon emissions by 2050. Moreover, some of the sectoral milestones provide quantitative benchmarks, such as the transition to 70 percent non-fossil energy sources, a reduction in technical and commercial losses to under 10 percent, and a 50 percent share of grid electricity in the industrial energy mix, up from 32 percent in 2020.

Rajasthan aims to strategically move towards a development pathway that provides a better future for the people in terms of development that translates into more jobs, a cleaner environment, and improved quality of life, including access to quality education, healthcare, housing, and infrastructure. It emphasises that development should be participative, empower citizens, and enhance individual capability and agency. It should also align with the national vision of building a clean and sustainable economy and be resilient to various disruptions and risks, whether they relate to energy supply and price shocks, supply-chain disruptions, or cyber threats.

The Energy Policy 2050 draft also defines roles and responsibilities among stakeholders involved in the energy transition to promote coherence and clarity in energy-related regulations. Simultaneously, it sends a clear and concise message to investors about the growth vision of the state and invites investments in sustainability-focused emerging sectors.

Read in detail

2. PM-eBus Sewa Programme to Deploy 10,000 e-Buses Across 169 Cities

The government has approved the 'PM-eBus Sewa' scheme for introducing 10,000 e-buses for public transport on a Public Private Partnership (PPP) model. The scheme would have an estimated cost of ₹576.13bn, out of which ₹200bn will be provided by the Central Government.

The scheme will be implemented across 169 cities with a population of three lakh or more, including all the capital cities of the Union Territories, the North Eastern Region, and the Hill States. Under this initiative, priority will be given to cities without organised bus services.

What is it about?

The scheme, PM-eBus Sewa, consists of two segments, A and B. Segment A of the scheme will augment city bus operations in 169 cities with 10,000 e-buses on a PPP model. Associated infrastructure will provide support for the development and up-gradation of depot infrastructure and the creation of behind-the-metre power infrastructure (substations, etc.) for e-buses. Segment B of the scheme envisages green initiatives like bus priority, infrastructure, multimodal interchange facilities, NCMC-based automated fare collection systems, charging infrastructure, etc. This initiative will create 45,000 to 55,000 direct jobs.

The scheme holds significant goals for the advancement of e-mobility through a multifaceted approach. It is designed to promote e-mobility by offering robust support for behind-the-metre power infrastructure and bolstering cities' efforts to expand their charging infrastructure under the Green Urban Mobility Initiatives. Moreover, the scheme backs up bus priority infrastructure and is expected to accelerate the adoption of energy-efficient electric buses, stimulate innovation within the e-mobility sector, and fortify the supply chain for electric vehicles.

Additionally, by enabling economies of scale through the aggregation of e-bus procurement, the scheme seeks to enhance cost-effectiveness. Beyond economic benefits, promoting electric mobility is expected to yield environmental advantages, such as the reduction of noise, air pollution, and carbon emissions. Furthermore, the envisaged modal shift towards bus-based public transportation is anticipated to contribute significantly to greenhouse gas reduction.

Read in detail

3. Launch of New Renewable Energy Technology Action Platform

A meeting between the U.S. Department of Energy (DoE) and the Ministry of New and Renewable Energy (MNRE) was held on August 29, 2023, to launch the new U.S.-India Renewable Energy Technology Action Platform (RETAP) under the Strategic Clean Energy Partnership.

Headed by the DoE's Deputy Secretary, David Turk, and the MNRE's Secretary, Bhupinder Singh Bhalla, RETAP represents a combined effort to intensify bilateral cooperation with a clear emphasis on result-oriented, technology-driven outcomes within defined timeframes.

What is it about?

The DoE and MNRE are embarking on a collaborative effort with a five-fold agenda: Research & Development for Innovative Technologies, Real-world Piloting & Testing, Advanced Training & Skill Development, Policy and Planning to Advance Renewable Energy, and Investment, Incubation, and Outreach programmes.

This strategic partnership aims to accelerate the adoption of renewable energy technologies, ensuring they are not only innovative but also practical and sustainable. By promoting research, training, policy development, and investment opportunities, this collaboration seeks to drive a rapid transition towards cleaner and more efficient energy solutions, contributing significantly to both environmental sustainability and economic growth.

This meeting marked the inauguration of the RETAP within the broader framework of the Strategic Clean Energy Partnership. During the meeting, the delegations shared information about emerging technology developments in each country, including hydrogen, energy storage, wind, geothermal energy, marine renewable energy technologies, and clean energy deployment programs.

Going forward, DoE and MNRE intend to enhance RETAP collaboration, including potentially through the creation of a RETAP Steering Committee, joint working groups and collaboration among subject matter experts.

Read in detail

4. MNRE Notifies Guidelines for Tariff-Based Competitive Bidding for Wind-Solar Hybrid Projects

The Ministry of New and Renewable Energy (MNRE) has released guidelines for a tariff-based competitive bidding process for the procurement of power from grid-connected wind-solar hybrid projects.

The guidelines aim to establish a framework for developing large grid-connected wind-solar photovoltaic hybrid systems, as a strategic effort to harness India's renewable energy potential.

What is it about?

The guidelines are in accordance with the provisions outlined in Section 63 of the Electricity Act, 2003 pertaining to the long-term procurement of electricity through a competitive bidding process, involving procurers, from hybrid power projects. These projects are required to possess a bid capacity of 10 MW or more if they are connected to the intra-state transmission system and a bid capacity of 50 MW or more if they are linked to the inter-state transmission system. An essential stipulation within these guidelines is that one of the renewable energy resources, either wind or solar, must constitute a minimum of 33 percent of the total contracted capacity.

In the official notification in the Official Gazette, these guidelines will supersede the prior guidelines issued by the MNRE. Projects that have been awarded, are currently under implementation or have been commissioned under the previous guidelines will remain subject to those regulations. Any ongoing bidding processes will be adjusted to align with the provisions delineated in the new guidelines.

These guidelines specify the advantages of amalgamating diverse renewable energy sources. This integration serves to mitigate energy output variability, enhance overall energy generation, and optimise the utilisation of both transmission infrastructure and land resources.

Read in detail

5. MNRE Defines Green Hydrogen Standards for India

The MNRE has defined emission thresholds that must be established for hydrogen production to be defined as 'green' hydrogen, indicating that it is derived from renewable sources.

These criteria hold true for both electrolysis-based and biomass-based methods of hydrogen production.

What is it about?

MNRE defined Green Hydrogen as having a well-to-gate emission (i.e., including water treatment, electrolysis, gas purification, drying and compression of hydrogen) of not more than 2 kg CO_2 equivalent/kg H_2.

The notification specifies that a detailed methodology for measurement, reporting, monitoring, on-site verification, and certification of green hydrogen and its derivatives shall be specified by the MNRE. It also specifies that the Bureau of Energy Efficiency shall be the Nodal Authority for accreditation of agencies for the monitoring, verification and certification of Green Hydrogen production projects. With this notification, India has become one of the first few countries in the world to announce a definition of Green Hydrogen.

Read in detail

6. Renewables Helped Power Sector Save US$520bn Globally in 2022

International Renewable Energy Agency (IRENA) published a report entitled 'Renewable Power Generation Costs in 2022.'

The report highlights that the adoption of renewable energy sources in 2022 significantly reduced the fuel expenses of the global energy sector. Specifically, the addition of new renewable energy capacity since 2000 resulted in a substantial reduction of over US$520bn in the electricity sector's fuel costs in 2022.

What is it about?

The recent fossil fuel price crisis has significantly boosted the competitiveness of renewable power. In 2022, a remarkable 86 percent (equivalent to 187 GW) of all newly commissioned renewable energy capacity had lower costs compared to fossil fuel-fired electricity.

The report also highlights that in 2022, various countries experienced distinct trends in costs due to factors like commodity and equipment cost inflation. Nevertheless, on a global scale, the average cost of electricity for utility-scale solar photovoltaic (PV) decreased by 3 percent, onshore wind by 5 percent, concentrating solar power by 2 percent, bioenergy by 13 percent, and geothermal by 22 percent. Conversely, offshore wind and hydropower were exceptions, with costs increasing by 2 percent and 18 percent, respectively. This increase was attributed to China's reduced involvement in offshore wind deployment in 2022 and cost overruns observed in several large hydropower projects. Over the past 13 to 15 years, the costs of generating renewable power from solar and wind sources have consistently declined.

This adoption of renewables over the past two decades played a crucial role in mitigating the economic disruption caused by the sharp increase in fossil fuel prices in 2022. Without these renewable energy investments, the impact of the price shock would have been considerably more severe, potentially beyond the capacity of many governments to mitigate the damage using public funding.

Read in detail

7. Solar Capacity in India Crosses 70 GW Mark

The Union Minister for New & Renewable Energy and Power recently informed the Parliament that as of 30 June 2023, a cumulative solar power capacity of 70,096 MW has been installed in the country.

The Minister also informed that the country has an estimated solar power potential of 7,48,990 MW. Hence, the potential of solar energy has not fully tapped, so far and hence it is making efforts to harness the available potential through various schemes and programs.

What is it about?

Several steps have been taken by the government to promote renewable energy, including solar energy, in the country such as: Permitting Foreign Direct Investment up to 100 percent under the automatic route; Waiver of Inter-State Transmission System charges for inter-state sale of solar and wind power for projects to be commissioned by June 30, 2025; Declaration of trajectory for Renewable Purchase Obligation up to the year 2029-30; Laying of new transmission lines and creating new sub-station capacity under the Green Energy Corridor Scheme for evacuation of renewable power.

The Minister also informed that the government is implementing various schemes to provide benefits of solar energy to the citizens/farmers of the country, such as the Solar Park Scheme for setting up at least 50 Solar Parks targeting 40,000 MW of solar power projects; Scheme for setting up 12,000 MW of Grid-Connected Solar PV Power Projects by the Government producers with Viability Gap Funding; Installation of Grid-Connected Solar Rooftop Power Plants, etc.

Read in detail

CUTS AT WORK

CUTS organised a webinar entitled, 'The G20 Championing the Consumer Movement' a resounding call to action, underscoring the pressing need to prioritise consumer protection within the G20 framework.

The event garnered active participation from over 100 participants worldwide, engaging in discussions through both the Zoom platform and YouTube Live streaming. The event provided a platform for comprehensive discussions on global consumer protection and advocacy efforts. Participants including representatives from civil society, media, industry experts, policymakers, and consumers contributed to advancing consumer rights and overall well-being on a global scale.

Pradeep S Mehta, Secretary General of CUTS International and Rebeca Grynspan, Secretary-General of UNCTAD, delivered the opening remarks, setting the stage for an evening of insightful discussions and the exchange of ideas.

Mehta in his talk highlighted the dynamic evolution of the G20, originating in 1999 as a platform for financial discussions, gradually expanding its scope to encompass various global issues, including consumer well-being. The financial crisis of 2007-08 spurred the elevation of the G20 to a forum for international economic cooperation, shaping the global response to financial vulnerabilities.

Rebeca Grynspan in her audiovisual message reminded the audience that when it comes to the 2030 agenda and its 17 Sustainable Development Goals (SDGs) the world is moving backwards on multiple fronts, such as eradicating poverty, addressing hunger, promoting women's rights, and fostering development. Only 12 percent of the SDGs are currently making the expected progress.

Other panellists in this webinar included Vijay K Nambiar, Principal Coordinator, Civil20, India; Fernando Blanco, Formal National Director for Consumer Defence, Argentina; Rohit Kumar Singh, Secretary, Department of Consumer Affairs, India; Athayde Motta, Executive Director, Brazilian Institute of Social and Economic Analyses; Thezi Mabuza, Acting Commissioner, National Consumer Commission, South Africa.

Read in detail here: https://tinyurl.com/2whjz2f6

Power Statistics for August 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					
423.36	238.14	56.25	177.77	41.99	69.22%	27.29%	209.01	208.95	0.1%

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