

May 2023

We welcome you to the twelfth edition of our monthly newsletter on energy and climate change. It consists of significant developments 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 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 May 2023 to update the reader on the developments in the power sector. CUTS International organised its 40th Anniversary event in Delhi on May 28, 2023. The aim of the 40th Anniversary celebration through this academic exercise was to shape CUTS' future interventions with a forward-looking view toward the changing global landscape. A brief of this event is discussed in the CUTS AT WORK section.

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1. Government Waives Transmission Charges On Offshore Wind, Hydrogen and Ammonia Projects



The Central Government announced a complete waiver of the inter-state transmission system (ISTS) charges on offshore wind, green hydrogen and ammonia projects for 25 years. The waiver is applicable to projects commissioned till December 31, 2032.

The decision will facilitate wider execution of offshore wind energy initiatives, as well as promote expansion of green hydrogen/green ammonia projects, and the offtake of renewable energy from energy storage system projects.

What is it about?

The off-shore projects commissioned from January 01, 2033, would be given graded ISTS charges. Earlier, all wind energy projects were provided waivers up to June 30, 2025. Now, offshore wind would be treated separately, and waiver to these would be granted up to December 31, 2032, with graded transmission charges thereafter. The government has also granted a complete waiver of ISTS charges for 25 years from the date of commissioning of the project for green hydrogen/green ammonia production units, using renewable energy (commissioned after March 08, 2019), pumped storage system or battery storage systems or any hybrid combination of these technologies.

To promote the development of pump storage plants (PSP), the criteria for availing the complete waiver of ISTS charges for PSP projects has now been linked to the date of award of the project rather than its commissioning. This shall be applicable in cases where construction work is awarded on or before June 30, 2025.

2. Cabinet Approves CITIIS 2.0 for Integrated Waste Management and Climate-Oriented Reform



The Central Government approved the second phase of the City Investments to Innovate, Integrate and Sustain (CITIIS) project, a programme under the ambit of the Smart Cities Mission, which aims to promote integrated waste management and climate-oriented reform actions. The CITIIS 2.0 will be implemented in 18 cities which would be selected based on a competition.The programme aims to support competitively selected projects promoting circular economy with a focus on integrated waste management at the city level, climateoriented reform actions at the state level, and institutional strengthening and knowledge dissemination at the national level.

What is it about?

The programme would span for four years from 2023-2027 and be implemented in partnership with the French Development Agency (AFD), Kreditanstalt für Wiederaufbau (KfW), the European Union (EU), and National Institute of Urban Affairs (NIUA).

The CITIIS 2.0 has three major components which are financial and technical support for developing projects focused on building climate resilience, adaptation and mitigation in up to 18 smart cities, support to all states and Union Territories on a demand basis and interventions at all Central, State and City levels to further climate governance in urban India through institutional strengthening, knowledge dissemination and capacity building.

The first phase of CITIIS had a total outlay of ₹9,330mn. It was launched in July 2018 with projects in 12 cities namely Agartala, Amaravati, Amritsar, Bhubaneshwar, Chennai, Dehradun, Hubbali-Dharwad, Kochi, Puducherry, Surat, Ujjain and Visakhapatnam. The funding for CITIIS 2.0 would include a loan of ₹17,600mn from AFD and KfW, split equally, and a technical assistance grant of ₹1,060mn from the European Union.

3. Central Electricity Authority Notifies National Electricity Plan for 2022-32



The Central Electricity Authority (CEA) has released the National Electricity Plan (NEP) for the period of 2022-32, outlining the projected electricity demand, installed capacity, and renewable energy targets. The NEP document, made available through the e-Gazette, encompasses a review of the past five years, a detailed plan for the next five years and institutional strengthening & knowledge dissemination at the national level.

What is it about?

According to the NEP, the projected peak electricity demand for India is expected to reach 277.2 GW in 2026-27 and 366.4 GW in 2031-32, with corresponding electrical energy requirements of 1,907.8 BU and 2,473.8 BU. These projections take into account various factors such as the increased adoption of electric vehicles (EVs), solar rooftop installations, green hydrogen production, and the Saubhagya scheme. The NEP outlines the likely installed capacity for 2026-27 as 609,591 MW, comprising 273,038 MW of conventional capacity (coal, gas, and nuclear) and 336,553 MW of renewable-based capacity (including large hydro, solar, wind, small hydro, biomass, and pump storage plants). Additionally, a battery energy storage system (BESS) capacity of 8,680 MW/34,720 MWh is planned.

The NEP aligns with India's target of achieving a non-fossil-based installed capacity of around 500 GW by 2029-30. It envisions the share of non-fossil-based capacity to increase to 57.4 percent by 2026-27 and potentially reach 68.4 percent by 2031-32, up from the current 42.5 percent as of April 2023. Furthermore, the NEP forecasts the average Plant Load Factor (PLF) for coal-based capacity to be around 58.4 per cent in 2026-27 and 58.7 percent in 2031-32.

4. Punjab Launches State Action Plan to Achieve Net Zero Goal



The Punjab Department of New and Renewable Energy launched Punjab State Energy Action Plan to ensure promotion of energy efficiency in buildings, industries, municipalities, agriculture, transport and other sectors.

The action plan is aimed at assisting government departments and agencies to adopt the most sustainable, long-term and inter-sectoral renewable and clean energy plans. Amritsar will be developed as solar city under this plan.

What is it about?

The Punjab Department of New and Renewable Energy signed a pact with GIZ's IGEN Access to Energy programme funded by the Ministry of Economic Cooperation and Development of Germany for seeking technical assistance for this action plan. It also launched a decision support tool and Amritsar smart city portal and renewable purchase obligations portal for the state.

Phase-I of development of Amritsar as a solar city has already been flagged off. Under this programme, 190 government buildings have been identified through drone mapping that would now have solar panel installations. This would help generate about 2.33 MW of solar electricity.

<u>Read in detail</u>

5. Government Reduces FAME-II Subsidy on Electric Two-wheelers



The government has reduced the subsidy provided under the Faster Adoption of Manufacturing of Electric Vehicles in India (FAME-II) scheme applicable to electric two-wheelers registered on or after June 01, 2023, according to a notification by the Ministry of Heavy Industries.

For the electric two-wheelers, the demand incentive will be ₹10,000 per kWh. The cap on incentives for electric two-wheelers will be 15 percent of the ex-factory price of vehicles from the current rate of 40 percent.

What is it about?

Earlier this month, a stakeholders' meeting with 24 electric two-wheeler OEMs registered under FAME-II was called and the consultation reached a consensus that the demand incentive may be kept at ₹10,000 per kWh of battery capacity, along with the 15 percent price cap. Most two-wheeler OEMs expressed that the subsidy should continue for a longer period even if it is slashed. So, a consensus emerged to reduce the subsidy to 15 per cent of the ex-factory price for two-wheelers, which will stretch the scheme till February-March.

The FAME India scheme commenced on April 01, 2019, for a period of three years, which was further extended for two years up to March 31, 2024. It is aimed to incentivise buyers of EVs to enable wider adoption, which may be encouraged as a purchase price. The total outlay for FAME Scheme Phase II is ₹100 billion to provide incentives to buyers (end users or consumers) of EVs to enable wider adoption, which may be encouraged as a purchase price.

<u>Read in detail</u>

6. Himachal Pradesh to Become Green Energy State by March 2026



Himachal Pradesh government put forth its plans to boost the use of EVs and transform the state into a 'Green Energy State' by March 2026. The state government emphasised the significance of finding and identifying suitable locations for charging stations as well as the planned three Green Corridors Highways in Himachal Pradesh. It also emphasised the need to progress the charging infrastructure within cities to boost the use of EVs.

What is it about?

To attain this goal, the Himachal Pradesh government approved the Rajiv Gandhi Self-Employment Scheme 2023. The scheme will provide a certain 50 percent subsidy for the purchase of e-taxis, e-buses, and e-trucks. This scheme not only facilitates self-employment opportunities for local young people along with enables government departments to recruit electric vehicle service providers. The state government targets to transition all government vehicles to EVs gradually and lead the way in green energy.

Also, the youth of the state will be given a 40 percent subsidy to set up solar power projects ranging from 250 kW to 2 MW on their own or leased land as per the state budget provisions for this fiscal. A solar power-based battery energy storage system project is proposed to be set up in Pangi in the Chamba district to strengthen the power supply system in one of the remotest regions of the state. The government also proposed the Himachal Pradesh Power Sector Development Programme with the assistance of the World Bank. Under this, there is a provision to construct solar power projects with a capacity of 200 MW and to construct 11 sub-stations and two distribution lines serving 13 towns.

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Read in Detail

7. International Energy Agency Releases World Energy Investment 2023 Report

iea

World Energy Investment 2023 This World Energy Investment 2023 (WEI 2023) report is the eighth annual report where IEA provide the global benchmark for tracking capital flows in the energy sector. The report provides a global benchmark for tracking capital flows in the energy sector and examines how investors are assessing risks and opportunities across all areas of fuel and electricity supply, critical minerals, efficiency, research and

development and energy finance. It focuses on some important features of the new investment landscape that are already visible, including the policies now in place that reinforce incentives for clean energy spending.

What is it about?

According to the report, Investment in clean energy technologies is significantly outpacing spending on fossil fuels as affordability and security concerns triggered by the global energy crisis strengthen the momentum behind more sustainable options. About US\$2.8tn is set to be invested globally in energy in 2023, of which more than US\$1.7tn is expected to go to clean technologies – including renewables, EVs, nuclear power, grids, storage, low-emissions fuels, efficiency improvements and heat pumps. The remainder, slightly more than US\$1tn, is going to coal, gas and oil.

Annual clean energy investment is expected to rise by 24 percent between 2021 and 2023, driven by renewables and EVs, compared with a 15 percent rise in fossil fuel investment over the same period. But more than 90 percent of this increase comes from advanced economies and China, presenting a serious risk of new dividing lines in global energy if clean energy transitions don't pick up elsewhere.

8. RBI Report Examines Implications of Climate Change on Economic Growth and Financial Stability



The Reserve Bank of India (RBI) has focussed on climate change as the primary theme in its Report on Currency and Finance (RCF) for 2022-23, a theme-based annual report on contemporary issues concerning central banking and macroeconomic issues in India. This year's report emphasises climate goals as a policy priority and analyses the potential macro-financial

consequences of climate change for India. The report looks into the physical indicators of climate change and policy action globally and in India. It goes on to discuss the macroeconomic effect of climate change in India, climate change and the financial sector, and policy options to mitigate climate risks.

What is it about?

The theme for this report is "Towards a Greener Cleaner India" and it claims that fiscal policy has a prominent role in driving the green transition, from fossil fuels to renewables, and highlights the urgent need for a green taxonomy, a classification system that determines whether an investment is sustainable or not.

It also discusses the role of central banks, such as the RBI in India, in dealing with climate change. The report discusses different sectors – electricity, mobility, industrial, and agricultural – and the impact of climate change in each. It also highlights sectoral green transition challenges. The report says that the industrial sector is the most difficult to decarbonise as it is highly energy intensive and also has a large, fixed investment. Decarbonisation in this sector would require major changes in production processes, expensive retrofits, development, and deployment of new technologies, as well as changes in business practices and policies.

CUTS AT WORK

CUTS International organised its 40th Anniversary event in New Delhi on May 28, 2023, which was attended by over 85 distinguished participants and over 200 on YouTube. The 40th Anniversary celebrations aimed to shape CUTS' future interventions with a forward-looking view toward the changing global landscape.

Speaking at the event, Amitabh Kant, India's G20 Sherpa, said that India as a leader in the south can offer its technology and support to the developing world to install a modern and inexpensive digital public infrastructure. This would help economic growth hugely and more inclusively.

Harsh Vardhan Shringla, India's G20 Chief Coordinator echoed Kant by stressing the fact that the Global South needs finances and new technology to fight climate change, without compromising their growth aspirations. Both Shringla and Kant asserted the rights of the Global South to develop.

Discussing the two leader's speeches, Sachin Chaturvedi, Director General, Research and Information System for Developing Countries said that his organisation will be hosting a new Centre of Excellence on Global South, which will take forward many of the new ideas being generated during the G20 deliberations in India and elsewhere.

Thanking everyone Pradeep S. Mehta, Secretary General, CUTS International said that to take forward the discussions at G20 in India, CUTS has conceptualised two proposals in partnership with research bodies in Brazil and South Africa to work on jobs and skills, and climate resilient infrastructure.

In conclusion, Mehta said that this event was the second Anniversary event in the world and more such events are on the anvil. The first was addressed by Dr Ngozi Iweala-Okonjo, Director General, World Trade Organisation in Geneva on April 06, 2023 which was a successful event considering that CUTS is a leading global NGO working on trade policy. The future events will take up other subjects on which CUTS has been working, such as competition and regulation, consumer protection and governance.



<u>Read in Detail</u>

Power Statistics for May 2023									
Installed capacity (GW)	Thermal		RE (including large hydro)		Thermal power	RE power penetration	Peak	Peak	
	Capacity (GW)	As a % of the total installation	Capacity (GW)	As a % of the total installation	in the generation mix	in the generation mix	demand (GW)	met (GW)	Shortage
416.59	237.26	56.95	172.54	41.42	78.88%	18.16%	216.87	215.88	0.5%



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