ENERGY and CLIMATE WATCH

CUTS International

October 2022

We welcome you to the fifth 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.

It is vital to switch from energy systems based on fossil fuels to renewables to lessen reliance on the unpredictable fossil fuel market and combat climate change. Additionally, the use of renewable energy has the potential to increase employment across all regions, particularly in rural areas. It is essential to emphasise India's enormous renewable energy potential to attract international investments and start the Green Energy Revolution. However, the renewable sector requires comprehensive policy and regulatory framework assistance. The push from industry is also necessary to adopt new technologies and rapid 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 2022 to update the reader on the developments in the power sector. In collaboration with Friedrich Ebert Stiftung (FES) India, CUTS International organised a Stakeholder Consultation titled "A Just Transition Approach for Developing a Green Economy: A case for Electric Mobility" in New Delhi on October 18, 2022. A brief of this event is discussed in the CUTS AT WORK section.

Contents

1. Uttar Pradesh Rolls Out Electric Vehicle Policy

Uttar Pradesh has issued Electric Vehicle Manufacturing and Mobility Policy 2022 with the objectives of: i) Make UP a global hub for electric mobility development and manufacturing; ii) Develop eco-friendly transportation system; iii) Enable investments for charging/ battery swapping infrastructure; iv) Attract manufacturers across the EV ecosystem for setting up units for supply to a global market and, v) Promote research and innovations in automobile technologies.

What is it about?

Key initiatives to be taken up under the policy regime are in the areas of – **a) Creation of charging infrastructure -** charging infrastructure in a grid of 3km x 3km in cities and at every 25 km on express/highways, open access route for charging stations/ swapping kiosks with demand above 1 MW, state government to facilitate land to service providers; capital subsidy of ₹1mn for charging stations and ₹0.5mn for swapping stations; **b) Promote faster transition/ adoption of EV –** green routes to be developed in each district, 100 percent transition of government vehicles, promotion of retrofitting, awareness campaigns, exemption from registration fee and road tax, subsidy of up to ₹5,000 for two wheelers, ₹12,000 for three wheelers, ₹100,000 for four wheelers, ₹2mn for E-buses and ₹100,000 for E-goods carriers; **c) Promote manufacturing** – promote EV clusters, high impetus on battery manufacturing, technology assistance through development of R&D and testing facilities, provision for land banks & single window clearing, subsidy of 30 percent on fixed capital investment, reimbursements on stamp duty charges, quality certification charges.

UP EV Policy

2. MNRE Issues Draft Wind Power Repowering Policy

The Ministry of New and Renewable Energy (MNRE) has issues a Draft National Repowering Policy for Wind Power Projects. The objective of the policy is the optimum utilisation of Wind energy resource by maximising energy (kWh) yield per sq.km of the project area and utilising the latest state-of the art onshore Wind turbine technologies. It aims to target wind turbines below 2 MW capacities.

What is it about?

As per the National Institute of Wind Energy, the repowering potential of the country is 25.40 GW considering wind turbines below 2 MW capacities. The eligibility criteria for wind turbines for repowering include – all turbines identified under the relevant BIS act, turbines with a capacity below 2 MW, turbines that have completed their design life and a set of existing wind turbines over an area. Repowering projects would be implemented through the respective state nodal agency or organisation involved in the promotion of wind energy in the state or a central nodal agency appointed by the central government.

MNRE Draft

3. Green Hydrogen Plant to be Set Up in Rajasthan with an Investment of ₹224bn

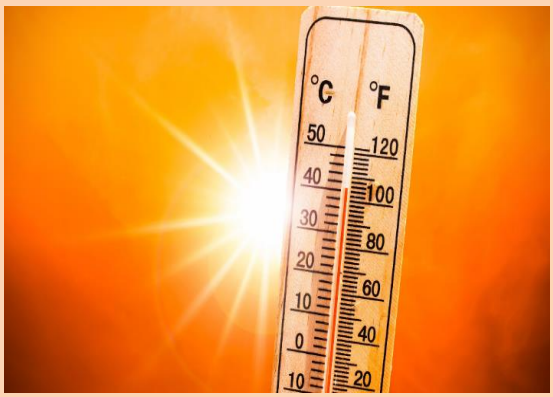
Jakson Green, a new energy transition platform by Jakson Group, has signed a memorandum of understanding (MoU) with Rajasthan government to invest about ₹224bn in the state to set up a green hydrogen and green ammonia project. The company will set up a 365,000 tonnes per annum plant along with an integrated hybrid renewable power complex in a phase wise manner. The project will create over 32,000 jobs over various stages of completion.

What is it about?

The plant's first phase proposed to be set-up in Kota will start manufacturing 15,000 tonnes of green ammonia by 2025. Work on this project will begin in 2023 and is expected to be completed by 2028. The state government would facilitate Jakson Green in obtaining necessary registrations, approvals, and clearances and provide incentives. In yet another development in the space of green hydrogen, Ohmium International, a US-based electrolyser manufacturer, has collaborated with Amp Energy India, an independent power producer, to deploy 400 MW of green hydrogen projects. The project will be installed over the next three years and aims at mid-sized industrial and commercial units of 25 MW or smaller.

Read in detail, 2

4. India's Loss due to Climate Change Highest among G20 Nations



India suffered an income loss of 5.4 percent of gross domestic product (GDP), the highest among the G20 nations in 2021, according to the Climate Transparency Report 2022. The losses were highest in the four sectors of services, manufacturing, agriculture and construction. In 2021, heat exposure in India led to the loss of 167 billion potential labour hours, a 39 percent increase from the 1990-1999 decade.

What is it about?

Climate Transparency Report 2022, compiled by 16 partner organisations from the majority of the G20 countries, stated that India witnessed record heatwaves which greatly affected workers, labour migrants, low-income households and the homeless. It also reduced the yields of wheat crops. Labour productivity in India is projected to decline by 5 percent from the 1986-2006 reference periods if global temperatures increase by 1.5°C. From 2016-2021, extreme events such as cyclones, flash floods, floods, and landslides caused crop damage in over 36 million hectares, a US$3.75bn loss for farmers in the country. The annual damage from river flooding in the country is likely to increase by around 49 percent at 1.5°C of warming. The damage from cyclones will increase by 5.7 percent.

Read in detail

5. Global Clean Energy Investment to Rise Above US$3tn by 2030

Clean Energy investment may cross US$3tn per year by 2030 – an increase of over 50 percent as compared to current level, according the World Energy Outlook 2022 report by International Energy Agency (IEA). However, it would be need to be above US$4tn by the same year in the net-zero scenario by 2050.

What is it about?

As per the report, the most notable responses towards climate change include the US Inflation Reduction Act, EU's Fit for 55 package and REPowerEU, Japan's Green Transformation Programme, Korea's aim to increase the share of nuclear and renewables in its energy mix, and ambitious clean energy targets in China and India. Faith Birol, Executive Director of IEA, stated after the report's launch that the main driver of clean energy investment was energy security rather than climate change. "Energy markets and policies have changed as a result of Russia's invasion of Ukraine, not just for the time being, but for decades to come," he said. "Even with today's policy settings, the energy world is shifting dramatically before our eyes."

Read in Detail

6. Earth on Track to Warm Above 2°C despite Climate Actions

As per a new report from the United Nations Framework Convention on Climate Change (UNFCC), government plans to reduce greenhouse gas (GHG) emissions are insufficient to prevent catastrophic global warming, with the planet on track to warm between 2.1 and 2.9°C by the end of the century compared to pre-industrial times. If emissions are not reduced sufficiently by 2030, cuts will need to be much sharper to compensate for the slow start.

What is it about?

Governments must do more by 2030 to ensure that the global temperature increase is below 2°C and, preferably, closer to 1.5C, the goal outlined in the Paris Agreement signed in 2015. Despite considerable progress made in the last year. All national climate plans, also known as nationally determined contributions, or NDCs, submitted since 2015 were examined by the UNFCCC to reach its conclusions. Human-caused GHG emissions must be cut in half by the end of this decade and eradicated by the middle of the century to keep global warming below 2°C by 2100, according to climate experts. Even if the consequences of global warming above that point are considered catastrophic, the current global warming of 1.1°C above pre-industrial levels has already produced permanent impacts.

Read in detail

7. India's New Coal Mine Projects Conflict with Net-Zero Targets

A temporary coal shortage has emboldened the Indian government to press ahead with plans to develop 99 new coal projects with production of 427 million tonnes per year (mtpa), a briefing by Global Energy Monitor stated recently. The underutilised capacity at existing mines (433 mtpa) is actually greater than the projected capacity from new mining projects, demonstrating their non-essentiality.

What is it about?

Land for new coal projects continues to be auctioned despite 36 percent of capacity at operating mines going unused. In some major mining regions like Jharkhand and Odisha, the industry has over 100 million tonnes in unused capacity at active mine sites, amounting to over 40 percent of unused mine capacity in those states. The 99 new coal projects threaten to displace at least 165 villages and affect 87,630 families, of which 41,508 live in scheduled areas of India, with a predominant population of tribal communities. Water shortages would be exacerbated by the new projects, increasing demand by 168,041 kilolitres per day. 37 Percent of new capacity will be located in high-risk water zones, while 54 percent is planned for extremely high water-risk zones.

Read in detail

CUTS AT WORK

CUTS International, in collaboration with Friedrich Ebert Stiftung (FES) India, organised a Stakeholder Consultation on "A Just Transition Approach for Developing a Green Economy: A case for Electric Mobility" in New Delhi on October 18, 2022. The consultation was based on the on-going project between CUTS & FES which looks into the potential and impact of decarbonisation of last-mile connectivity on the local economy and livelihood opportunities, from a 'just transition' point of view.

The world's finest IT sector of India could be a very vibrant and dynamic incubator for innovation and R&D for the shared, connected and electric mobility revolution which is going to happen in India, said Amitabh Kant, the present G20 Sherpa of India and former Chief Executive Officer of Niti Aayog, at the event.

Speaking on plans for driving electric vehicle (EV) adoption, Kant added, "India is essentially a market of about 75 percent of two wheelers (2Ws) and three wheelers (3Ws). Therefore, our policy should be that we should first ensure that 100 percent of 2Ws and 3Ws become absolutely green." Further, he felt that the next 5 decades are crucial for the country and green mobility will play a huge role when it comes to India's strategy of "becoming the first nation in the world to industrialise with carbonising."

Adding to the discussion, Pradeep S. Mehta, Secretary General of CUTS, spoke about the issues with the EV industry in India including skyrocketing demand for raw materials to make batteries, inadequate growth of charging infrastructure in the country, massive number and limited speed of e-rickshaws leading to traffic congestions and finally the subjectivity in the concept of just transition.

Read in Detail

Power Statistics for October 2022									
Installed capacity (GW)	Thermal		RE		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					
407.78	236.09	57.89	164.93	40.44	71.78%	10.73%	200.35	199.5	0.4%

CUTS International

D-217, Bhaskar Marg, Bani Park, Jaipur 302 016, India.
Ph: +91.141.228 2821, Fax: +91.141.228 2485, E-mail: cuts@cuts.org, Web: www.cuts-international.org
Also at Delhi, Calcutta and Chittorgarh (India); Lusaka (Zambia); Nairobi (Kenya); Accra (Ghana);
Hanoi (Vietnam); Geneva (Switzerland); and Washington DC (USA).