

We welcome you to the January 2024 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 January 2024 to update the reader on the developments in the power sector. CUTS International organised an event on "What Would It Take India to Realise its Potential Growth?" as part of CUTS 40th Anniversary Lecture. A brief description of the event is discussed in the CUTS AT WORK section.

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1. Global Biodiversity Framework Adopted at COP15



The United Nations Biodiversity Conference (COP15) concluded in Montreal, Canada resulted in the adoption of the Kunming-Montreal Global Biodiversity Framework (GBF).

GBF aims to address biodiversity loss, restore ecosystems, and protect indigenous rights, with plans to include concrete measures to halt and reverse natural cover loss to mitigate the effects of climate change and undo the damage done to degraded environments.

What is it about?

The Framework contains four overarching global goals – 1. to protect nature, including: halting human-induced extinction of threatened species and reducing the rate of extinction of all species tenfold by 2050; 2. sustainable use and management of biodiversity to ensure that nature’s contributions to people are valued, maintained and enhanced; 3. fair sharing of the benefits from the utilisation of genetic resources, and digital sequence information on genetic resources; and 4. that adequate means of implementing the GBF be accessible to all parties, particularly Least Developed Countries and Small Island Developing States.

A few of the targets to be achieved by 2030 include – increasing the area under protection and conservation from the current 17 percent of land and 8 percent of maritime areas to at least 30 percent; reducing the loss of areas of high biodiversity importance and high ecological integrity to near zero; halving the global food wastage; raising the international financial flows from developed to developing countries to at least US\$30bn per year; and mobilising at least US\$200 bn per year from public and private sources for biodiversity-related funding.

Other targets include – the restoration of 30 percent of terrestrial and marine ecosystems; phasing out or reforming subsidies harmful to biodiversity while simultaneously incentivising conservation and sustainability; and requiring transnational companies and financial institutions to monitor, assess, and transparently disclose risks and impacts on biodiversity through their operations, portfolios, supply and value chains.

Finance being a key, COP15 concluded that developed are responsible and liable to invest in addressing the biodiversity losses in developing countries. To address this, the participating countries approved a series of agreements to implement the GBF, including planning, monitoring, reporting, and review.

[Read in detail](#)

2. India-Argentina Signs Agreement for Lithium Exploration



Khanij Bidesh India Limited (KABIL) signed an agreement with the Argentinian state-owned Catamarca Minera Y Energetica Sociedad Del Estado (CAMYEN SE) to explore and mine lithium resources.

The agreement gives India exclusivity rights over five lithium brine blocks in the Catamarca region of Argentina.

What is it about?

This agreement will open avenues KABIL to start the exploration and development of five lithium blocks in Argentina. Argentina is a part of the ‘Lithium Triangle’ along with Chile and Bolivia with more than half of the world’s total lithium resources. The country is home to the 2nd largest lithium resources, the 3rd largest reserves, and the 4th largest production capacity in the world.

This is the first ever lithium exploration and mining project by a Government of India Company. KABIL will start exploration and development of 5 lithium brine blocks spanning over 15,703 hectares viz. Cortadera-I, Cortadera-VII, Cortadera-VIII, Cateo-2022-01810132, and Cortadera-VI. KABIL plans to prepare to set up a branch office in Catamarca, Argentina. The project is set to cost about ₹200 crores.

The agreement ensures exploration and exclusivity rights to evaluate, prospect and explore in the stated blocks. It also gives KABIL the commercial rights to exploit the mineral after its detection. This will not only boost its quest for lithium sourcing, but will also help gain technical and operational experience for Brine-type lithium exploration, exploitation, and extraction.

The agreement will boost India’s commitments to renewable energy transition. The move not only strengthens the bilateral ties between India and Argentina but also contributes to the sustainable development of the mining sector, ensuring a resilient and diversified supply chain for critical and strategic minerals essential for various industries.

[Read in detail](#)

3. MNRE Launches Solar Power Scheme for Vulnerable Tribal Groups



The Ministry of New and Renewable Energy has launched the 'New Solar Power Scheme for Particularly Vulnerable Tribal Groups (PVTG)' under Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN).

The scheme will enable the electrification of one-lakh unelectrified households in PVTG areas using off-grid solar systems.

What is it about?

The New Solar Power Scheme will cover the electrification of one lakh unelectrified households situated in PVTG areas in the states and Union Territories of Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Odisha, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand, and West Bengal, and the Union Andaman & Nicobar Islands. The scheme has a total outlay of ₹24,104 crores, split between a central share of ₹15,335 crores and a state share of ₹8,768 crores.

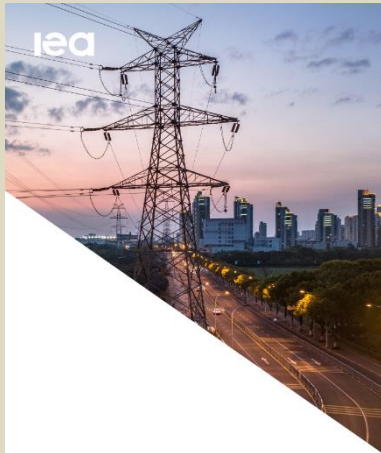
Electrification in the specified PVTG areas through conventional grid connectivity is not techno-economically feasible. The households covered in the scheme will be provided with off-grid electrification as per the norms of the Ministry of Power. Electrification will be provided using Solar Home Lighting Systems (SHLS) or Solar Mini-Grids.

Each household will be provided with a 0.3 kW solar off-grid system for ₹50,000 per household or as per the actual cost. Households will also be provided with necessary appliances such as LED bulbs and fans free of cost, along with onsite comprehensive maintenance services for five years. Solar Mini-Grids will be installed instead of SHLS where there are clustered households and for solarising Multi-Purpose Centres (MPCs). The implementing agency is the regional DISCOM which will install and commission the two systems for three months for SHLS and nine months for Solar Mini-Grids.

The scheme provides standalone electricity connections across PVTG areas for households as well as for public utility purposes, such as street lighting, etc. It opens the possibility of connecting these areas to the main grid in the future.

[Read in detail](#)

4. IEA Releases Electricity 2024 Report



International Energy Agency (IEA) released the report entitled ‘Electricity 2024: Analysis and Forecast to 2026,’ analysing and predicting energy and electricity demand for the period 2024-26.

The report offers an analysis of recent policies and market developments while providing forecasts for electricity and supply, and CO₂ emissions. The report also features an in-depth analysis of the drivers of recent declines in electricity demand in Europe; the data centre sector’s impact on electricity consumption; and recent developments in the global nuclear power sector.

What is it about?

Global electricity demand grew at 2.2 percent in 2023, less than the 2.4 percent observed in the previous year. China, India, and various Southeast Asian countries were at the forefront of this growth in electricity demand. On the contrary, the advanced economies showed a substantial decline due to a lacklustre macroeconomic environment amid high inflation. However, the electricity demands are stated to grow annually averaging at 3.4 percent till 2026, driven by a commitment towards net-zero emissions by 2050.

About 85 percent of additional electricity demand is predicted to come from emerging economies, such as China, India, and Southeast Asia. One exception is from the Africa region where the demand has stagnated over the past three decades. However, the report predicts an increase in demand at a rate of four percent over 2024-26. Among the developed economies, electricity demand is set to grow nominally in the US, while demand has been falling in the EU due to the weakening industrial sector amid high energy prices.

Clean electricity supply, including nuclear and renewables, is forecasted to cover all global demand growth through 2026, reducing the share of fossil fuels. Renewables are projected to overtake coal in global electricity generation by early 2025 accounting for more than a third of the global electricity generation. Nuclear power generation is also expected to reach a new record by 2025, with Asia leading growth.

The report concludes that CO₂ emissions from electricity generation are set to decline along with a reduction in renewable electricity generation costs which will benefit the end-users. However, despite a decline in wholesale electricity prices from 2022 highs, prices remain elevated in many countries as of the publishing of this report.

[Read in detail](#)

5. CPI Released Just Energy Transition Report



Climate Policy Initiative (CPI) has released a report on the economic implications of Just Energy Transition for Jharkhand, referring to the importance of Just Transition Planning.

The report highlights the complex and dynamic challenges presented by different facets of the transition. It also puts forth a diverse array of approaches to ensure no stakeholder is left behind.

What is it about?

The report examines the annual economic implications of low-carbon transition for stakeholders in the state of Jharkhand, India. The study identifies that the low-carbon transition, while promising long-term benefits, presents short-to-medium-term challenges, such as declining income in fossil fuel sectors, state revenue losses, job loss, etc. The report provides the following broad recommendations on how the adverse effects could be minimised:

- (a) State-owned mining and power generation companies should diversify into other related businesses that are likely to gain from the transition, such as energy storage, green hydrogen, clean mobility, and solar energy.
- (b) The state government of Jharkhand needs to develop a transition plan that bridges the gap between projected revenue and expenditure in the medium-to-long term by attracting new low-carbon businesses, and creating new opportunities that foster sustainable economic pathways.
- (c) State-owned large employers such as NTPC, DVC, CIL, and its subsidiaries, etc., along with the state government, could develop initiatives/programmes for skill development and reskilling of the entire workforce, including for contractual or indirect employees. An overarching Just Transition plan could be the first step for the state government to ensure a more diverse, resilient, and sustainable economy.

The report highlighted that to achieve a Just Transition, government assistance should be based on the broad principles of Recognition Justice, Procedural Justice, Distributive Justice, and Restoration Justice, as outlined by the International Labour Organisation (ILO). Planning is critical to ensure that implications for all stakeholders are mitigated or managed in a socio-economically acceptable manner and individually empowering.

[Read in detail](#)

6. IREDA-IOB to Co-Finance Renewable Energy Projects 2024



Indian Renewable Energy Development Agency Limited (IREDA) signed a Memorandum of Understanding (MoU) with Indian Overseas Bank (IOB) for collaborative efforts in co-lending for a diverse spectrum of Renewable Energy projects across the nation.

The partnership aims to streamline loan syndication and underwriting processes, management of Trust and Retention Account (TRA) for IREDA borrowers, and work towards fixed interest rates over a three to four-year period for IREDA borrowings.

What is it about?

Some of the key features of the draft rules are:

- (a) On request of any owner or occupier of any premise in a group housing society, residential colony, or resident welfare association, the distribution licence shall provide individual connections for the supply of electricity.
- (b) The tariff charged by such associations from the owner or occupier of any premise shall not exceed the retail tariff for that category of consumers. However, they can charge an additional amount for the cost incurred for providing electricity up to the premises of the individual consumer.
- (c) The distribution licensee shall provide a separate connection for the supply of electricity for the EV charging system on request by an individual consumer, a group housing society, a residential colony, a resident welfare association, or other such registered associations.
- (d) The distribution licensee shall test metres within 30 days of receiving a complaint from the consumer. If the consumer complains that his metre readings are not per his consumption, the distribution licensee shall install an additional metre to verify the consumption for a prescribed minimum period.

[Read in detail](#)

7. CEA Issues National Electricity Plan (Draft) Volume II – Transmission, 2023



The Central Electricity Authority (CEA) issued the draft of the second volume of the National Electricity Plan, with an emphasis on the upscaling of transmission.

The draft highlighted that India needs ₹4.75tn investment in transmission infrastructure to boost renewable energy integration by 2027.

What is it about?

The report states that to achieve a non-fossil fuel-based electricity generation capacity of 500 GW, there is a need to connect regions with high solar and wind potential to the Inter-State Transmission System (ISTS) for efficient power evacuation to demand centres. The plan encompasses 170 transmission schemes, with an estimated cost exceeding ₹3.13tn for inter-state transmission and around ₹1.61tn for intra-state systems.

The report highlights India's progress in renewable energy, with a current capacity of 178.98 GW, including 46.85 GW from large hydro sources, constituting 42 percent of the nation's total power generation capacity. Projections indicate that by 2026-27, India aims to reach a power generation capacity of 650.26 GW, comprising 235.13 GW from thermal sources, 206.14 GW from solar, and an anticipated 13.5 GW from battery energy storage systems (BESS).

Furthermore, the report outlines a ₹15,120 crore investment to connect the Andaman & Nicobar Islands to the mainland, aiming to transition from diesel generators to green energy by 2028-29 through an under-sea cable spanning 1,150 km.

The report also highlights India's engagement in cross-border power transfer with Nepal, Bangladesh, Bhutan, and Myanmar, currently exchanging 4,100 MW and expected to reach 7,000 MW by 2026-27. Plans involve interconnections with Sri Lanka and discussions on linking the Indian Electricity Grid with Maldives, Singapore, UAE, and Saudi Arabia under the One Sun One World One Grid initiative.

The draft plan provides a comprehensive review of the transmission system's development from 2017-2022, detailed planning for 2022-27, and a prospective plan covering the period 2027-32.

[Read in detail](#)

CUTS AT WORK

CUTS hosted an event on “What Would It Take India to Realise its Potential Growth?” as part of CUTS 40th Anniversary Lecture at Symbiosis School of Economics in Pune, Maharashtra.

Jyoti Chandiramani, Dean of Symbiosis School of Economics painted the macro picture of the Indian economy and provided an optimistic view for high potential growth. She further set forth the floor for discussion by raising some crucial questions on the type of consumption (whether frugal, or productive), and the existing divergence in the economy.

Pradeep S Mehta, Secretary General of CUTS International, who was moderating the event highlighted that the judicial delays are a big handicap for businesses to run their business smoothly and to citizens in resolving their disputes. At the least, our courts should get out of the colonial system of vacation closures and work like any other institution and clear the backlog. He also added that this call has been made by many senior leaders, including Narendra Modi, the Prime Minister of India, but the judiciary is not listening.

Vijay Kelkar, Vice President, Pune International Centre (Chair), emphasised the idea that India needs to adopt a universal approach and not just a narrow outlook on the economic front. There should be openness to competition and global markets for the economy to achieve its potential growth.

Ajit Ranade Vice Chancellor, Gokhale Institute of Politics and Economics, spoke about the high growth potential of India and the imperative of such growth to be high, sustainable, and inclusive economic growth. One interesting fact stated by him was that while there is a 1 percent aggregate population growth in India, there is a 2 percent growth in the workforce. This symbolically represents that India is experiencing a demographic dividend and will continue to do so for a long time. He further added that to increase investment spending, there is a need to increase private investment spending. The key determining factors for private investment spending are stability, predictability, and continuity.

Read more about the event here: <http://tinyurl.com/s63p275t>



Power Statistics for January 2024

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					
428.29	240.02	56.04	180.79	42.21	79.49	17.28	213.79	213.62	0.1