

POWER MARKET CAPSULE-183rd Edition

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TPTCL'S E-NEWS LETTER



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Tata Power Trading Company Limited (TPTCL)



Power Market News

Madhya Pradesh govt announces electricity subsidy of over Rs 20,700 cr

Amid concerns regarding a power crisis in the country, Madhya Pradesh Chief Minister Shivraj Singh Chouhan announced a subsidy of over Rs 20,700 crores on electricity, with an aim to provide cheap electricity to farmers and domestic consumers. Speaking to ANI, Chouhan said, "Today in Cabinet meeting, we have decided to give a subsidy of over 20,700 crores on electricity to provide cheap electricity to our farmers and domestic consumers in spite of an increase in power prices across the world."

The chief minister also requested people to consume electricity wisely and to save as much power as possible. He added that electricity must not be wasted 'just because it is available'. A few chief ministers in the country have flagged the power crisis that might arise in their respective states due to the coal shortage in power generation plants. These states include Delhi, Punjab and Chhattisgarh.

However, Union Minister of Coal Pralhad Joshi assured that there would be no shortage of coal for electricity production and the temporary shortage of coal was due to rain. Speaking about crop destruction in Madhya Pradesh caused due to unexpected rains, Chouhan said, "Due to untimely rains, crops of farmers were damaged in some parts of the state. I want to assure them that they do not have to worry at all. I have given instructions for a survey that will be done to assess the damage and relief will be provided to farmers." [Source](#)

Issues that remain unaddressed in Electricity Amendment Bill 2021

Over the past two decades, India has pushed for significant reforms in the power sector, which have helped the country transition from a power deficit to a power surplus nation. The establishment of The Electricity Act (the "Act") of 2003 laid the groundwork for this progress, as India attempted to reform all aspects of the power sector, including generation, distribution, transmission, trading, and consumption. During this period, India pursued an aggressive capacity expansion strategy in the power sector with a focus on "Power for All"; successfully achieving a 100 per cent household electrification rate. While sustained economic growth will drive electricity demand, necessitating further capacity additions, India's power sector strategy will prioritise efficiency, decarbonization, modernization, and reliability of power sector assets. Investments from foreign and domestic investors in the power sector will be the key to achieve these objectives, especially in realizing Prime Minister Modi's ambition of raising the deployment of renewable energy capacity by five-fold to 450 GW by 2030. This investment into energy is also reflected in realignment of India's diplomatic outreach. A case in point is India's growing energy security cooperation with the United States, which recently saw the relaunch of the US-India Strategic Clean Energy Partnership, which will aid in the acceleration of the deployment of affordable, reliable, and sustainable energy solutions.

In light of recent reforms, The Electricity (Amendment) Bill (the "Bill"), 2021 can open up the power sector for additional investments by incorporating structural changes, in addition to the existing liberal foreign direct investment (FDI) policies. One of the key proposals of The Electricity (Amendment) Bill, 2021, is to bring in revisions to the Act to end the monopoly of state-run power distribution utilities (DISCOMs) and to delicense power distribution. Distribution of electricity is sacrosanct to the power industry. The proposed reforms appear significant and timely, given that, despite two decades of power sector reforms, many electricity distribution companies' finances are still in poor shape, as the majority of DISCOMs are unable to pay generation and transmission companies, as well as banks and financial institutions. Furthermore, while efficiency improvement efforts aimed at reducing technical and commercial losses



have yielded results, with overall AT&C losses in India's DISCOMs hovering around 22 per cent, significant reforms are required to be considered on par with better-run utilities elsewhere in the world.

The bill envisages to increase the private sector participation in the distribution sector introducing competition and creating a framework that allows the power consumer to select their own supplier. This will lead to fresh investments into the sector, increased adoption of cutting-edge technologies and a more resilient network infrastructure. It is significant to note that the current outstanding dues owed to generator by DISCOMs on a pan-India basis total Rs 98,450 crore (as of Sept 2021, PRAPTI portal), which jeopardises the power sector's financial sustainability and erodes investor sentiment significantly. The poor financial health of the DISCOMs has also prevented investors from funding infrastructure needed to improve the supply quality and to integrate renewable energy coming online. The various proposals of the bill, such as Direct Benefits Transfer to deposit power subsidies to end beneficiaries' account and introduction of time limit for adoption of tariff determination, aim to relieve DISCOMs' financial burden. Payment security for power generators, as proposed in the bill, is key to a stable investment climate and the ability to attract greater FDI into the sector.

While there are other positive reforms in the proposed bill, including promotion of renewable energy, improved governance, and provisions of a universal service obligation fund, there are remaining issues that need to be addressed.

Fears of Centralization:

While the bill empowers the National Load Dispatch Centre (NLDC) with the responsibility of ensuring the safety and stability of the pan-India grid, the Regional Load Dispatch Centres (RLDCs) and State Load Dispatch Centres (SLDCs) also need to be strengthened. The regional and state system operators can be made responsible for monitoring payments to all generating entities, ensuring the establishment of payment security and uploading curtailment data of the grid and its constituents. This will facilitate the Bill's robust implementation, given the concurrent structure of the power sector, and will empower system operators at all levels to act transparently.

Need for strengthening the RE Framework:

All entities defined in the Act should be bound by the provisions of the National Renewable Energy Policy (NREP), the National Tariff Policy, and the National Electricity Policy, which have historically been regarded as merely guiding documents, diluting their true intent. Additionally, generation of electricity from renewable energy sources should be enshrined as a must-run provision in the Bill, as these sources are reliant on environmental resources that are beyond human control. The Bill should include stringent penalties for non-compliance and curtailment for non-grid security-related reasons.

Clarity on delicensing of distribution:

The Bill should clarify the distribution sub-licensee's roles and responsibilities, as well as the way they are intended to operate within their operational and contractual framework.

Demarcation of Powers:

A clear division of authority between the Electricity Regulatory Commissions (ERCs) and the Electricity Contract Enforcement Authority (ECEA) is necessary for contract performance issues. Disputes such as extensions of Scheduled Commercial Operation Dates (SCOD), Change in Law relief, and Force Majeure



claims, while purely contractual in nature, have the potential to affect the tariff and may result in contract termination.

The Indian power sector continues to be one of the most attractive investment opportunities globally, as evidenced by India's remarkable progress in renewable energy deployment, with 136 GW of installed renewable capacity now accounting for 38 per cent of its installed electricity generation. However, COVID-19 has had a negative impact on investment inflows, with FDI inflows into the Indian power sector falling to 61 per cent in 2019-20 and 34 per cent in 2020-21, respectively, from 2018-19 levels. With rising power demand over the last few months indicating that India's economy has entered a strong recovery, the situation is expected to reverse soon.


A new wave of inclusive and holistic power sector reforms is necessary to transform DISCOMs and the electricity grid. This is in order to sustain India's economic recovery, maintain the country's transition to sustainable forms of renewable energy, and attract the FDI required to meet the country's ambitious energy and climate targets. Through the recently launched U.S.-India Climate and Clean Energy Agenda 2030 Partnership, President Biden and Prime Minister Modi announced several priority areas of collaboration that would help modernize the power sector to support large-scale integration of renewables and facilitate investment to accelerate India's clean energy transition. If the proposed amendments to The Electricity (Amendment) Bill, 2021 are implemented by addressing the issues raised above, they will go a long way toward achieving these goals by improving the investment climate in the renewable sector. As COP 26 nears in Glasgow, Scotland, these collective efforts will help develop a cleaner energy roadmap with additional low carbon routes. [Source](#)

Non-pithead plants may need to stock coal for a minimum of 20 days

Thermal power plants located away from mines will have to maintain coal stocks adequate to operate at 75% of capacity for at least 20 days, according to new norms the government is expected to soon notify to prevent an energy crisis in the future. This requirement will go up to 22 days in the summer months and a maximum of 23 days in the January-March, a senior government official said. The minimum 20-day requirement is for the heaviest monsoon months of July-September. The government expects norms to end the annual coal-led power crisis after the rainy season, he said.

Power plants located at pitheads will have to stock coal adequate to run for 10 days at 75% capacity in monsoon months and 12 days in April-June. The stations are required to keep a stock of 13 days for January-March.

COAL STOCK AT 75% CAPACITY		
	Non-pithead Plants	Pithead Plants
Apr-Jun	22 days	12 days
Jul-Sep	20 days	10 days
Oct-Dec	21-22 days	10-11 days
Jan-Mar	23 days	13 days




India is in the grip of a power crisis with plants running low on fuel as demand rose and costly imported fuel rendered nearly 18 GW capacity unviable.

Data till October 17 showed that plants of 165-GW monitored power capacity had four days of average coal stock. Of the 135, 74 plants had less than four days of stock. While the coal situation has not improved substantially, lower demand due to cooler weather in the north and festival holidays has helped alleviate the situation. Average spot power prices on the Indian Energy Exchange (IEX) were ₹4.02 per unit against Rs 14 per unit a week ago. Power and renewable energy minister RK Singh had told ET in an interview that peak demand in summer next year is expected to cross 200 GW.

ET had on October 7 reported that India has decided to simplify coal stocking regulations for thermal power stations, mandating them to maintain fuel inventories based on a specified plant load factor to avert the annual crisis the country faces during peak electricity demand seasons. Currently, the coal stock requirement of a plant is based on the last seven-day average consumption. Pithead plants have to maintain 15 days' stock, while for other generators this can go up to 30 days, depending on the distance between the unit and mine.

The rules are seen as faulty because, in case demand spikes and more coal is consumed, stocks will deplete rapidly and plants will run out of fuel before being replenished. "We have framed revised coal stocking norms to ensure there is no crisis when there are supply disruptions due to rains, fog, or other eventualities," said the official cited above. The stocking rules of the Central Electricity Authority (CEA) were last modified in 2017.

The government will also soon begin a monthly grading system for power generation projects based on their maintained coal-stock positions and dues to coal companies, the official said. Companies with a higher grade will be given priority in coal allocation and dispatch during hours of crisis. [Source](#)

NITI Aayog launches Geospatial Energy Map of India in collaboration with ISRO

NITI Aayog has launched a Geographic Information System (GIS)-based Energy Map of India. "NITI Aayog in collaboration with Indian Space Research Organisation (ISRO) has developed a comprehensive Geographic Information System (GIS) Energy Map of India with the support of Energy Ministries of Government of India," a statement issued by the Aayog said. "The GIS map provides a holistic picture of all energy resources of the country which enables visualisation of energy installations such as conventional power plants, oil and gas wells, petroleum refineries, coal fields and coal blocks, district-wise data on renewable energy power plants and renewable energy resource potential through 27 thematic layers," it said.

The map attempts to identify and locate all primary and secondary sources of energy and their transportation/transmission networks to provide a comprehensive view of energy production and distribution in a country. It is a unique effort aimed at integrating energy data scattered across multiple organizations and presenting it in a consolidated, visually appealing graphical manner. It leverages the latest advancements in web-GIS technology and open-source software to make it interactive and user friendly. The Geospatial Energy Map of India will be useful in planning and making investment decisions. It will also aid in disaster management using available energy assets.

Dr Rajiv Kumar, Vice-Chairman of NITI Aayog, while launching the GIS-based Energy Map of India, stated that GIS mapping of energy assets will be useful for ensuring real-time and integrated planning of the energy sector of India, given its large geographical distribution and interdependence. "Energy markets have immense potential to bring in efficiency gains. Going forward, GIS-based mapping of energy assets

will be advantageous to all concerned stakeholders and will help in accelerating the policy-making process. Fragmented data has been brought together; this will be a great research instrument," Kumar said. Dr K Sivan, Chairman ISRO and Secretary Department of Space, also attended the launch event.

[Source](#)

Powering the energy sector

In an energy-dependent country like India, the availability of energy supplies at affordable rates is pivotal for fulfilling developmental priorities. But the energy sector is beset with problems. The distribution sector has for long been the bane of the power sector, consistently making huge losses owing to problems such as expensive long-term power purchase agreements, poor infrastructure, inefficient operations, and leakages and weaknesses in State-level tariff policies. Most discoms are deep into the red as high aggregate technical and commercial (AT&C) losses are chipping into their revenues.

Dismantling state monopoly

Against this backdrop, the Electricity (Amendment) Bill of 2020 is a game-changing reform. The wide-ranging provisions of the Bill will set the process of de-licensing power distribution after the monopoly of the state is dismantled. This will provide the consumers with an option of choosing the service provider, switch their power supplier and enable the entry of private companies in distribution, thereby resulting in increased competition. In fact, privatisation of discoms in Delhi has reduced AT&C losses significantly from 55% in 2002 to 9% in 2020.

Open access for purchasing power from the open market should be implemented across States and barriers in the form of cross subsidy surcharge, additional surcharge and electricity duty being applied by States should be reviewed. Discoms and regulators should be brought on board for proper implementation of open access, which will provide more options to consumers to choose their discom just as they are able to choose telecom providers.

The question of tariffs needs to be revisited if the power sector is to be strengthened. Tariffs ought to be reflective of average cost of supply to begin with and eventually move to customer category-wise cost of supply in a defined time frame. This will facilitate reduction in cross subsidies. All this will happen when discoms are made autonomous and are allowed by regulatory authorities to revise tariffs without interference from the States.

Electrical energy should be covered under GST, with a lower rate of GST, as this will make it possible for power generator/transmission/distribution utilities to get a refund of input credit, which in turn will reduce the cost of power. Other antidotes to the problem include use of technology solutions such as installation of smart meters and smart grids which will reduce AT&C losses and restore financial viability of the sector.

Push for renewal energy

The impetus to renewal energy, which will help us mitigate the impact of climate change, is much needed. One option is to encourage roof-top solar plants. Despite its inherent benefits, the segment has shown relatively slow progress with an estimated installed capacity of 5-6 GW as on date, well short of the 2022 target. Another welcome feature of the Bill is the strengthening of the regulatory architecture of the sector. This will be done by appointing a member with a legal background in every electricity regulatory commission and strengthening the Appellate Tribunal for Electricity. This will ensure faster resolution of long-pending issues and reduce legal hassles.



The Bill also underpins the importance of green energy by proposing a penalty for non-compliance with the renewable energy purchase obligations which mandate States and power distribution companies to purchase a specified quantity of electricity from renewable and hydro sources. This will ensure that India gradually moves towards non-fossil fuels thereby helping it meet its global climate change commitments. Some other significant features of the Bill such as the creation of an Electricity Contract Enforcement Authority to supervise the fulfillment of contractual obligations under power purchase agreement, cost reflective tariffs and provision of subsidy through DBT are commendable. Early passage of the Bill is critical as it will help unleash a path-breaking reform for bringing efficiency and profitability to the distribution sector. [Source](#)

How rains, lack of foresight of power producers & states caused a power crisis in India

India has installed base of 388-Gw, including 202-Gw projects based only on coal. The country managed 200 GW of peak demand on July 7 this year, when the coal stocks were just enough, and rains had not disrupted coal supplies. Also, the 17,600-Mw imported coal-based projects were functional then. The immediate crisis seems largely fuel-related with prolonged monsoons impacting coal mining and high cost of imported coal rendering such fuel-based capacity unviable. However, coal stocking data shows, lack of adequate planning by states, non-payment of dues to Coal India accentuated the supply issues. States did not build stocks through the year when there were supplies available, significantly contributing to the crisis. Sarita C Singh looks at the crisis:

To read the full article click on source. [Source](#)

Power sector needs a complete overhaul

“Enough coal supply is available”, “Power plants are not holding sufficient coal stock” and “Railways not transporting enough coal”, among others, have been making news for the past few days. This led to not only the Home Minister, Amit Shah, but also the Prime Minister’s Office getting into action, even as fears of some parts of country plunging into darkness began spreading fast. However, this is not the first time one hears such news during the monsoon season; it’s been happening annually. But the situation this time is more serious and if one goes by what industry has to say, if action is not taken, it could be worse next year.

So, what exactly went wrong? If one asks the Coal Ministry, fingers are pointed at the Power Ministry, and the two together point fingers at the railways, which has the task of transporting the feedstock to coal-based power plants. And, therefore, the question that emerges is: Is it not time to fix responsibility? The key factors that have been identified for the present coal crisis are: imported coal-based power plants defaulting in supply, which put pressure on domestic coal plants; unpaid dues of distribution utilities leading to domestic coal supplier, Coal India Ltd, curbing supply; and monsoon leading to restricted movement of locally produced coal.

Besides, there is a connected issue of lack of liquidity with distribution utilities resulting in payment crunch for generators, who have in turn been unable to pay and procure coal. This has pushed the reserve capacities down. This circle of liquidity crunch could have been avoided if the much-delayed reforms in the power sector — starting with the Electricity Act amendment, distribution utilities reforms and payment reforms — had been addressed.

Also not to forget is the over-optimism on renewables. The past couple of years, with the focus being squarely on renewables, thermal has remained largely neglected (especially the independent power plants). With no more offering of long-term thermal power purchase agreements (PPAs) from the distribution utilities, addition of new thermal capacities has come to halt and the country’s assumption



that renewable energy capacities are indicators of actual generation has put the industry in a bind, according to those following the sector closely.

According to industry trackers, with poor wind seasons continuing, wind capacity generation has been low. Similarly, solar capacity additions have also been impacted due to Covid lockdown. This situation might worsen, with most of the solar capacities earlier projected for commissioning next year being delayed due to steep increase in import duties imposed on solar modules and cells.

Putting it in perspective, the Director-General of Association of Power Producers, Ashok Khurana, said: “We need to move from best effort basis to accountability of stakeholders — Coal India, the railways and generators.” Elaborating, he said, for stocking of coal, generators need to be paid for ‘output sold’. Currently, receivables for power sold are ₹1,16,000 crore. “Where will they get liquidity to buy and stock coal? Coal India and railways take one month advance payment — then also, supply is on best-effort basis. It is a vicious circle — to solve you need to ensure payment from distribution utilities.”

APP has been raising the issue with the government. “One of the most critical issues pertain to the need for institutionalising a Tripartite Fuel Supply and Transport Agreement for coal supplies to the power sector to avoid the continual blame game over coal supply shortages.”

According to APP, though electricity demand has been steadily improving since the commencement of the ‘unlock’ phases, it is yet to reach its expected peak for this year. The fact that coal-based power continues to contribute 75 per cent of the total electricity generation in the country, and that transportation of coal to the power sector contributes around 40 per cent of railways’ freight revenues, it indicates the urgent need for commercialisation of the relationships of the stakeholders (power plants, coal companies and railways) to ensure accountability. This would help stop the perennial blame games and ensure that the country’s electricity demand is met.

Coal stocking norms

To avoid such a crisis situation in future, the Ministry of Power has worked out a strategy. According to Secretary Power, Alok Kumar, “the way forward to avoid such situations includes tweaking the coal stocking norms. If the power plants do not follow them, then there will be a penal provision.” “It has also been observed that some captive coal mines are not operating pending regulatory clearances like those from the Environment Ministry. And most of the approvals pending are at the State level. Since there is a conscious effort to increase more captive coal mining operations, we are trying to resolve such issues along with the Environment Ministry,” he said.

Clearly, the target is to promote more generation from renewable energy. But the challenge has been storing the energy produced from these resources. “To overcome this, the government is working on a provision for creating more storage facilities in the grid for power generating from renewable energy in future,” he added. On penalising the defaulting import-based plants, which are mostly governed by power purchase agreements, he said, there is a thinking that the penalty from the current levels for non-supply must be increased.

Currently, the penalty for non-supply is only 20 per cent. Besides, many States have capped the price at which imports can be done, which is not justified and arbitrary. There is a move to correct this too. India can learn a lesson from Europe’s power crisis. While Europe has gas power plants to stand in, India doesn’t have similar options. “As we move more towards greening of our power sources, we need to provision for paying for standby thermal generation to avoid a mega crisis. Adequate liquidity for back-up reserve capacity needs to be planned and provisioned for,” said an industry observer.



Probably, the present situation is a good opportunity to rethink and fine-tune the energy policy without further delay. Bits and pieces reforms will not work anymore, as the chain has to be broken and a complete overhaul is required. [Source](#)

67.6 GW of excess coal-fired power capacity can be retired in India

A new report says India has an estimated 29% of the installed fossil fuel capacity in excess of what is required to meet its 2021 peak electricity demand. This is equivalent to 67.6 GW of overcapacity — all coming from coal-based power plants. The report, released by Centre for Research on Energy and Clean Air (CREA) and TransitionZero, highlights this excess fossil fuel capacity can be retired immediately without compromising reliable supply of electricity in the country.

The report also looks at electricity demand and supply in other South Asian countries including Pakistan, Bangladesh, and Sri Lanka. It uses a modeling exercise based on actual peak demand and source-wise generation data around the peak demand. According to the report, South Asia has over 75 GW of excess fossil fuel capacity. This excess capacity can be phased out resulting in improved utilization of other power assets as well as annual savings of over US\$ 2.3 billion.

The report found that approximately 75 GW — or 27% of the total excess fossil fuel capacity (coal, Oil, and Gas) in the modeled countries in 2021— can be considered overcapacity in South Asia. The high amount of overcapacity found in the study is a result of excessive investment in coal development, as construction has far outpaced actual demand growth within countries. Together, India, Bangladesh, and Pakistan commissioned over 30 GW of coal, oil, and gas capacity between March 2018 and 2021.

“Our analysis finds that India has the largest overcapacity of fossil fuel in South Asia. Over 67 GW of coal-fired capacity in India is found to be in excess. This is costing Indian ratepayers over US\$ 2.1 billion (INR 15,780 crore) annually. Retiring 67 GW of excess coal-fired capacity will not only save billions of dollars but also help India improve its air quality,” said Sunil Dahiya, Analyst at CREA.

In regulated electricity markets like those in South Asia, investments are made through power purchase agreements (PPAs). Conventional fossil fuel generators are often shielded from market forces and receive fixed capacity charges/payments regardless of whether plants are utilized. Such payment policies make overcapacity a cost borne by consumers and can raise the overall cost of electricity.

An estimated \$2.3 billion in fixed operating & maintenance costs is spent despite no longer being necessary to meet peak demand. Given the enormous potential savings in maintenance costs and benefits to human and planetary health, phasing out excess fossil fuel capacity and ensuring that future demand is met by renewable energy by halting additional fossil fuel projects is a crucial first step in the energy transition.

Sunil Dahiya, one of the authors, said, “Future electricity can reliably be met from cleaner alternatives such as wind and solar with battery storage. Investing in retrofitting already excess coal capacity is a poor investment decision since it will take away necessary capital needed for investments in renewable energy technology, but also extend the life of an inefficient and polluting coal power plant for many years.” “In India, various estimates pin the cost of retrofitting existing coal power plants to the tune of US\$ 10 – 12 billion. In Pakistan and Bangladesh, most of the coal-fired capacity have very poor emission control standards resulting in poor air quality. Retrofitting these coal plants with best available emission control technology would mean additional investments to protect public health.” Dahiya added. [Source](#)



India emerges reliable cross-border electricity provider to Nepal & South Asian partners

India and Nepal have signed an agreement to develop the 400KV cross-border power transmission line between Butwal (Nepal) to Gorakhpur (India). The agreement has paved the way for the construction of a second cross-border transmission line between the two countries which will prove to be the lifeline for Nepal in area of power trade. This is important to note that the signing of this agreement was a prerequisite for the implementation of the US Millennium Challenge Corporation (MCC) grant to Nepal, under which, if implemented, Nepal is to receive \$500 million for electricity transmission and road infrastructure projects.

MCC is one of the largest US grants in recent history of Nepal for the development of infrastructure. The Nepal Compact is also first project in South Asia of MCC in itself. One of the broad areas under MCC is the Electricity transmission project which includes the construction of high-voltage power transmission line to facilitate greater electricity trade with India. In the next three years, more than 3,000MW of electricity will be added to Nepal's national grid, more than doubling the generation capacity.

The new lines will allow this power to be distributed within Nepal, and also to export surplus power to India through the Butwal Gorakhpur corridor, ET has learnt. Despite its vast hydropower potential, mismanagement and poor governance prevails which costs Nepal Rs. 20 billion of annual budget and importing nearly half of its power demand from India. Currently, the 400KV Dhalkebar-Muzaffarpur Cross-border transmission line is the crucial power line for power trade between the two countries. If some problem arises in this power line, Nepal will be able to trade power through the alternative transmission line after the completion of the Butwal-Gorakhpur Transmission Line.

The new agreement has been reached at a time when the Nepalese authority has been reporting wastage of electricity after all turbines of the 456MW Upper Tamakoshi Hydropower Project started producing electricity. The Butwal-Gorakhpur Transmission Line can act as a suitable channel to fulfil the seasonal demand and supply as Nepal relies heavily on run-of-the-river projects whose output peaks during the monsoon when India's agricultural sector sees a surge in power demand, ET has learnt. Similarly, Nepal can also import energy through this line during the dry season when the plants run at less than 50 percent of their capacity.

As per a report by the National Renewable Energy Laboratory's Strategic Energy Analysis Centre of the US, Butwal is a strategic location for cross-border energy trade between India and Nepal because of its proximity and ability to connect with India's populous state of Uttar Pradesh and the Northern Regional Load Despatch Centre via Gorakhpur where power demand is high during the monsoon. India is centrally placed in the South Asian region and with cross border interconnections with neighbouring countries, playing a major role in effective utilization of regional resources. Further, to facilitate import/ export of electricity between India and neighbouring countries, Ministry of Power, Government of India have issued the "Guidelines for Import/Export (Cross Border) of Electricity-2018".

India have also developed expertise in high capacity high voltage transmission projects. Presently, India is connected with Nepal, Bhutan, Bangladesh and Myanmar. For transfer of bulk power, interconnection between India and Nepal through Dhalkebar (Nepal) - Muzaffarpur (India) 400kV D/C transmission line has been constructed. A total of about 700 MW of power is being supplied to Nepal through these interconnections.

India and Bhutan already are connected through various lines, mainly for import of about 2000 MW power from Tala HEP (1020MW), Chukha HEP (336MW), KurichuHEP(60MW) and Mangdechu HEP (720 MW)



in Bhutan to India. Further, Punatsangchu-I (1200 MW) and Punatsangchu-II (1020 MW) HEPs in Bhutan, are expected to be commissioned by 2024-25.

The transmission system for transfer of this power from these projects to India is already in place. With the commissioning of these HEPs the power transfer between Bhutan and India would be enhanced to about 4200 MW.⁹ A high capacity interconnection between India and Bangladesh exists through Baharampur (India) – Bheramara (Bangladesh) 400kV D/C lines along with 2x500 MW HVDC back-to-back terminal at Bheramara. Another 400kV (operated at 132kV) interconnection exists between Surajmaninagar (Tripura) in India to Comilla in Bangladesh. These interconnections cumulatively facilitate transfer of power of the order of 1160MW to Bangladesh. Further, to enable more intra-regional electricity trade, including competitively-priced power generated from Hydro-electric power projects in India, Nepal and Bhutan; development a 765kV Double Circuit cross-border electricity interconnection between Katihar (India), Parbotipur (Bangladesh) and Bornagar (India) was also agreed.

India is providing about 3 MW of power from Moreh in Manipur (India) to Tamu town in Myanmar through 11 kV transmission line. Strengthening of more low capacity links at various places along the border is being jointly worked out. There has been over-politicisation of the issue of MCC compact in Nepal that could hamper prospects of future FDI in Nepal. There are allegations that the different opinions, debates, questions being raised against MCC clauses are being raised by those Nepalese politicians, media and scholars who are under Chinese pressure which is luring Nepal through BRI. [Source](#)

India's October power supply deficit worst since March 2016

India's power supply fell about 750 million units short of demand during the first 12 days of October, largely due to a coal shortage, a deficit of 1.6% that was the worst since March 2016, data from grid regulator POSOCO showed. The October shortfall was already the biggest in absolute terms for a single month since November 2018, even with 19 days of October still left. Northern states such as Rajasthan, Punjab, Haryana and Uttar Pradesh, and the eastern states of Jharkhand and Bihar, were the worst affected, registering supply deficits of 2.3%-14.7%.

Increased economic activity after the second wave of the coronavirus pandemic has driven up demand for coal leading to a supply shortage, forcing northern states such as Bihar, Rajasthan and Jharkhand to cut power for up to 14 hours a day. India has asked power producers to import up to 10% of their coal needs to blend with domestic coal and has warned states of electricity supply curbs if they are found selling on power exchanges to cash in on surging prices.

India's dependence on coal-fired power increased to 69.6% in October from 66.5% in September, the data showed, exacerbating the coal shortage amid a decline in output from other sources such as wind and hydro. More than 60% of India's 135 coal-fired power plants have fuel stocks of less than three days. The share of output from renewable energy so far in October fell to 8.34% from 11.33% in September, while hydro energy output fell by 1.3 percentage points, the data showed. [Source](#)

PFC becomes 11th Maharatna CPSE

Power Finance Corp. Ltd (PFC) has become the 11th Maharatna central public sector enterprise (CPSE), with the union government according it the coveted status that now provides the state-run firm with greater operational and financial autonomy. *Mint* earlier reported about India's largest power sector set to become a Maharatna after a clearance from an inter-ministerial committee. The other 10 Maharatna CPSEs at present are Bharat Heavy Electricals Ltd, Bharat Petroleum Corp. Ltd, Coal India Ltd, GAIL (India) Ltd, Hindustan Petroleum Corp. Ltd, Indian Oil Corp. Ltd, NTPC Ltd, Oil & Natural Gas Corp. Ltd,

Power Grid Corp. of India Ltd, and Steel Authority of India Ltd. There are 14 Navratna and 73 Miniratna CPSEs.

"An order to this effect was issued today by the Department of Public Enterprises, under the Ministry of Finance. Incorporated in 1986, PFC is the largest Infrastructure Finance Company today, exclusively dedicated to Power Sector under the administrative control of the Ministry of Power," PFC said in a statement on Tuesday.

PFC can now invest up to ₹5,000 crore, or 15% of its net worth, in a single project after its Maharatna status. This comes against the backdrop of the government using power sector lenders such as PFC and REC Ltd to in still financial discipline at state-owned electricity distribution companies (discoms).

"The grant of 'Maharatna' status to PFC will impart enhanced powers to the PFC Board while taking financial decisions. The Board of a 'Maharatna' CPSE can make equity investments to undertake financial joint ventures and wholly-owned subsidiaries and undertake mergers and acquisitions in India and abroad, subject to a ceiling of 15% of the Net Worth of the concerned CPSE, limited to Rs.5,000 crore in one project. The Board can also structure and implement schemes relating to personnel and Human Resource Management and Training. They can also enter into technology Joint Ventures or other strategic alliances among others," the statement added.

The Maharatna dispensation was ushered in by the Union government for mega CPSEs to become global giants. PFC, India's largest non-banking financial company (NBFC) and among the 14 Navratna CPSEs, can invest up to ₹5,000 crore, or 15% of its net worth, in a single project apart from being granted enhanced powers by the government for undertaking mergers and acquisitions once it gets the Maharatna status. Navratna and Miniratna CPSEs can invest up to ₹1,000 crore and ₹500 crore, respectively.

"PFC has received the Maharatna Status on the back of exceptional financial performance during the last 3 years. Despite Covid, PFC witnessed the highest ever annual sanctions and disbursements to the Power Sector to the tune of Rs.1.66 Lakh Crore and Rs. 88,300 Crore during FY 2020-21 and the highest ever profit of Rs.8,444 crore in FY 2021-22. PFC played a significant role amid Covid by funding DISCOMs under the Liquidity Infusion Scheme ('Aatmanirbhar Bharat Scheme') to avert liquidity crisis in Power Sector," R.S. Dhillon, chairman and managing director, PFC said in the statement.

PFC registered a 34% increase in net profit for the quarter ended 30 June to ₹2,274 crore. REC Ltd registered a 22% increase in its net profit to ₹2,247 crore for the quarter. The buyout of the government's entire stake in REC Ltd by PFC in 2019 cleared the decks for the \$80 billion lending institution. A CPSE should have a Navratna status, be listed on an Indian stock exchange, and have an average annual turnover and net profit of ₹25,000 crore and ₹5,000 crore, respectively, over the previous three years for it to be awarded Maharatna status, according to the government.

" Union Minister of Power and New & Renewable Energy, Shri R.K. Singh congratulated and remarked that "conferment of 'Maharatna' status is a reflection of the confidence of the Govt. of India on PFC's strategic role in the overall development of Indian Power Sector and an endorsement of its sterling performance. This new recognition will enable PFC to offer competitive financing for the power sector, which will go a long way in making available affordable & reliable 'Power For All 24x7'," the statement said.

"The enhanced powers that come with Maharatna Status will also help PFC in pushing the Government's agenda of funding under the National Infrastructure Pipeline, national commitment of 40% green energy



by 2032 and effective monitoring and implementation of the New Revamped Distribution Sector Scheme with an outlay of more than Rs.3 Lakh crore," the statement added. [Source](#)

Power ministry mandates energy accounting for discoms to curb power losses

The Ministry of Power said it has mandated energy accounting of distribution companies (discoms) to reduce electricity losses. "As an important step under the ongoing power sector reforms, the Ministry of Power today mandated electricity distribution companies to undertake energy accounting on a periodic basis," the ministry said in a statement.

The regulations in this regard have been issued by the Bureau of Energy Efficiency (BEE) with the approval of the Ministry of Power, under the provisions of the Energy Conservation Act, 2001. The notification stipulates quarterly energy accounting by discoms through a certified energy manager within 60 days. There will also be an annual energy audit by an independent accredited energy auditor. Both these reports will be published in the public domain.

Energy accounting reports will provide detailed information about electricity consumption by various categories of consumers and the transmission and distribution losses in various areas. It will identify areas of high losses and theft and enable corrective actions. This measure will also enable the fixation of responsibility on officers for losses and theft. The data will enable the discoms to take appropriate measures for reducing their electricity losses.

The discoms will be able to plan for suitable infrastructure up-gradation as well as demand-side management (DSM) efforts in an effective manner. This initiative will further contribute towards India's climate actions in meeting our Paris Agreement goals, it stated. These regulations have been issued under the ambit of the Energy Conservation Act, 2001, with an overall objective to reduce distribution sector inefficiency and losses, thereby moving towards the economic viability of discoms.

BEE has certified a pool of national accredited energy auditors and energy managers who possess expertise in preparing energy accounting and audit reports, duly providing recommendations for loss reduction and other technical measures. The regulations were pre-published in April 2021 for seeking public comments and thereafter, the Ministry of Power held detailed discussions with various stakeholders before finally issuing these regulations, it stated.

In September 2020, through a separate notification, all power distribution companies were notified as designated consumers under the Energy Conservation Act. Owing to the potential benefits of energy auditing on the entire distribution system and retail supply business, it was imperative to develop a set of comprehensive guidelines and frameworks, so that all distribution utilities across India can adhere to and formulate actions.

Energy accounting prescribes accounting of all energy inflows at various voltage levels in the distribution periphery of the network, including renewable energy generation and open access consumers as well as energy consumption by the end-consumers. Energy accounting on periodic basis and subsequent annual energy audit will help to identify areas of high loss and pilferage and thereafter suggest focussed efforts to take corrective actions.

The regulations issued provides a much-awaited broad framework for discoms to carry out annual energy audit and quarterly periodic energy accounting with necessary pre-requisites and reporting requirements to be fulfilled. Objectives to be achieved through periodic energy accounting include the development of

a comprehensive energy accounting system to quantify and determine actual losses in the power distribution system, segregated across technical and commercial losses.

It is also aimed at identifying areas of leakage, theft, wastage or inefficient use, thereby paving the way for tackling the current challenges of high transmission and distribution (T&D) losses. It will enable and ensure an independent third-party energy audit of the distribution system to arrive at a true and fair picture of T&D losses. It will also enable discoms to undertake targeted efficiency improvement activities to reduce T&D losses in priority areas/customer segments. It is also aimed at providing a basis for prioritising energy capital investments and help budget more accurately to achieve maximum results. It will help in the identification of overloaded segments of the network for necessary capacity additions.

[Source](#)

First Phase of Market-Based Economic Dispatch of Power to Start from April 2022

The Ministry of Power (MoP) has released the framework for implementing the Market-Based Economic Dispatch (MBED) – Phase 1 program to reduce consumers' power purchase costs by 5%. MBED will ensure that the cheapest generating resources across the country are dispatched to meet the overall system demand. The ministry said it would be a win-win situation for both the distribution companies (DISCOMs) and the generators, resulting in significant savings for electricity consumers.

The power demand by all states is proposed to be met through a central pool allocating power at the optimal price. Currently, DISCOMs have been sourcing power from available sources within the states, invariably ending with a higher energy cost. The implementation of MBED – Phase 1 is expected to begin from April 1, 2022. The Central Electricity Regulatory Commission (CERC) will conduct trial runs to ensure the system runs smoothly. Interstate generation facilities will participate in the first phase, while other generation facilities can join voluntarily.

The ministry said that the time is right for optimizing generating facilities to deliver benefits of reduced operating costs to distribution utilities and end consumers. With substantial generation capacity additions over the past few years, a robust day-ahead market will also form the basis for transitioning away from the country's over-dependence on longer-term power purchase agreements to sustainable market-based operations.

Implementing MBED in the day-ahead horizon is an essential step in reforming electricity market operations and moving towards 'One Nation, One Grid, One Frequency, One Price.' In June 2021, the ministry issued a discussion paper on MBED for stakeholders to submit their feedback. In July, it also organized a consultation workshop with state governments and DISCOMs, regulatory commissions, and state power generating companies in August.

Considering total power generation of 1,393 billion units in the country with a weighted average power price of ₹2.36 (\$0.032)/kWh, the savings from the proposed mechanism would be 3.74%, amounting to ₹122.95 billion (\$1.69 billion), the ministry had then said. Mercom had earlier reported that the ministry had decided to set up an integrated day-ahead market (DAM) at the power exchanges with different price formations for power generated from renewable energy and conventional power. [Source](#)

Discoms' outstanding dues to gencos rise 3.3% to Rs 116,127 cr in October

Total outstanding dues owed by electricity distribution companies (discoms) to power producers rose 3.3 per cent year-on-year to Rs 1,16,127 crore in October. Discoms owed a total of Rs 1,12,384 crore to

power generation firms in October 2020, according to portal PRAAPTI (Payment Ratification And Analysis in Power procurement for bringing Transparency in Invoicing of generators).

Total dues in October 2021 also increased sequentially compared to Rs 1,12,815 crore in September this year. The PRAAPTI portal was launched in May 2018 to bring in transparency in power purchase transactions between generators and discoms. In October 2021, the total overdue amount, which was not cleared even after 45 days of grace period offered by generators, stood at Rs 97,481 crore as against Rs 97,811 crore in the same month a year ago.

The overdue amount stood at Rs 96,316 crore in September this year. Power producers give 45 days to discoms to pay bills for electricity supply. After that, outstanding dues become overdue and generators charge penal interest on that in most cases. To give relief to power generation companies (gencos), the Centre enforced a payment security mechanism from August 1, 2019. Under this mechanism, discoms are required to open letters of credit for getting power supply.

The Centre had also given some breathers to discoms for paying dues to gencos in view of the COVID-19-induced lockdown. The government had also waived penal charges for the late payment of dues. In May 2020, the government had announced a Rs 90,000-crore liquidity infusion for discoms under which these utilities got loans at economical rates from Power Finance Corporation (PFC) and REC Ltd. This was a government initiative to help gencos remain afloat. Later, the liquidity infusion package was increased to Rs 1.2 lakh crore and further to Rs 1.35 lakh crore.

Discoms in Rajasthan, Uttar Pradesh, Jammu & Kashmir, Telangana, Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Jharkhand and Tamil Nadu account for the major portion of dues to gencos, the data showed. Overdue of independent power producers amounted to 53.25 per cent of the total overdue of Rs 97,481 crore of discoms in October 2021.

The proportion of central PSU gencos in the overdue was 26.69 per cent. Among the central public sector gencos, NLC India alone has an overdue amount of Rs 5,047.45 crore on discoms, followed by NTPC at Rs 3,974.25 crore and Damodar Valley Corporation at Rs 2,261.22 crore in October 2021. Among private generators, discoms owe the highest overdue of Rs 25,717.97 crore to Adani Power, followed by Bajaj Group-owned Lalitpur Power Generation Company at Rs 3,645.56 crore in the month under review. The overdue of non-conventional energy producers like solar and wind stood at Rs 17,010.44 crore in October 2021. [Source](#)

India mandates use of biomass pellets in some coal-fired plants

CHENNAI: India has made the use of biomass pellets mandatory in some coal-fired thermal power plants in a bid to cut air pollution by using agricultural waste that is otherwise burnt by farmers to generate electricity. The decision, announced by the power ministry, makes it mandatory for three categories of thermal power plants to use a 5% blend of biomass pellets along with coal.

Farmers in some northern Indian states burn off vast swathes of paddy stalks and straw during the winter season to prepare the ground for planting. The process causes severe spikes in air pollution from late September which often lead to a thick blanket of smog over northern India. The federal policy will come into force in October 2022, with a requirement to increase the proportion of biomass to 7% within two years for two categories of power plants.

"The policy for co-firing of biomass would be in force for 25 years or until the useful life of the thermal power plant, whichever is earlier," the power ministry said in a statement. Authorities in Delhi ordered a

ban on the storage, use and sale of firecrackers in the Indian capital last month ahead of the Diwali festival in November to curb air pollution which causes thousands of deaths each year. Delhi Chief Minister Arvind Kejriwal has been tweeting about increasing pollution levels, and asking state governments in neighbouring states to keep stubble burning in check. [Source](#)

'Government envisions to make affordable power available round the clock'

The performance of Rural Electrification Corporation (REC) and Power Finance Corporation (PFC) Limited was reviewed by the Union Power Ministry on October 4 and 5, stated the press release from the ministry. Union Minister of Power and New and Renewable Energy RK Singh said that the Government envisions to make affordable power available for all round the clock.

He emphasized that there is a need to 'improve competitiveness' of both the bodies with a view to increase their market share. He suggested that both the institutions should be 'nimble-footed' and adjust to the changing market requirements, increasing renewables and to attempt to reduce their cost of funds. He also advised PFC and REC to try out better and cheaper alternatives of raising funds, considering offshore sources.

He demanded that the PFC and REC carry out a strategic analysis to adapt to the changed business environment in this sector with an aim to deliver power to consumers at a reasonable price. He also stressed on the need for speedy resolution for Stressed Assets. He suggested multiple measures to both the bodies in this respect like ensuring that the stressed assets are resolved at a fair value with a minimal haircut for PFC & REC keeping them in line with the national interests.

He said that the two organizations must establish their physical presence across the country to increase their outreach. Singh also highlighted that the system of oversight must be tightened by increasing frequency of inspections by company officials and also by hiring expert professionals from the market. Risk management should be strengthened, he emphasised further. He raised concerns at the finances of some Distribution Companies while suggesting remedial measures to the two bodies such as establishing presence of their lender nominees in the Board of Directors of DISCOMs of concern. [Source](#)

Transmission charges payable by DICs for the billing month of Nov'21

The Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses), Regulations 2020 came into force with effect from 1.11.2020. In these New Regulations, STOA charges will be determined based on monthly state transmission charges and there shall not be any separate injection and drawl PoC charges, for STOA. Further, DISCOMs having long term Access are not required to make any payment against POC charges for STOA transaction.

Transmission Charges for Short Term Open Access (STOA)			
Sl. No.	State	Region	STOA rate (paise/kWh)
1	Delhi	NR	45.04
2	UP	NR	47.42
3	Punjab	NR	48.47
4	Haryana	NR	66.40
5	Chandigarh	NR	38.29

6	Rajasthan	NR	58.66
7	HP	NR	37.34
8	J&K	NR	39.80
9	Uttarakhand	NR	47.15
10	Gujarat	WR	46.84
11	Madhya Pradesh	WR	43.34
12	Maharashtra	WR	45.27
13	Chhattisgarh	WR	34.96
14	Goa	WR	44.23
15	Daman Diu	WR	42.35
16	Dadra Nagar Haveli	WR	45.08
17	Andhra Pradesh	SR	47.57
18	Telangana	SR	33.07
19	Tamil Nadu	SR	38.29
20	Kerala	SR	38.61
21	Karnataka	SR	40.13
22	Pondicherry	SR	36.53
23	Goa-SR	SR	32.64
24	West Bengal	ER	43.05
25	Odisha	ER	42.54
26	Bihar	ER	43.15
27	Jharkhand	ER	43.56
28	Sikkim	ER	35.53
29	DVC	ER	39.85
30	Bangladesh	ER	33.37
31	Arunachal Pradesh	NER	38.84
32	Assam	NER	40.70
33	Manipur	NER	38.13
34	Meghalaya	NER	35.15
35	Mizoram	NER	38.61
36	Nagaland	NER	54.71
37	Tripura	NER	42.74

Bilateral Tender Results:-

Noida Power Company Limited/Short/21-22/RA/44				
Sl. No.	Quantity(MW)	Period	Time Block (Hrs.)	Price (Rs./KWh)
1	160	11.10.2021 to 31.10.2021	00:00 to 24:00	6.89-6.90
2	135	01.11.2021 to 09.11.2021	00:00 to 24:00	6.39-6.77

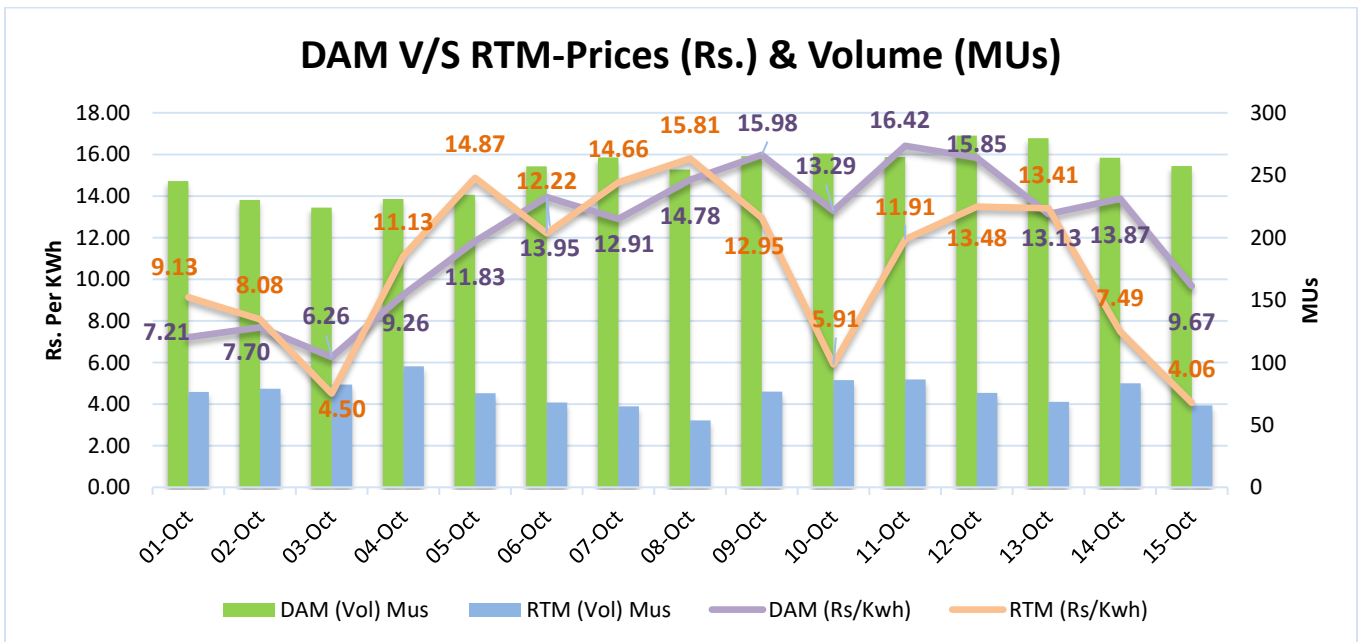
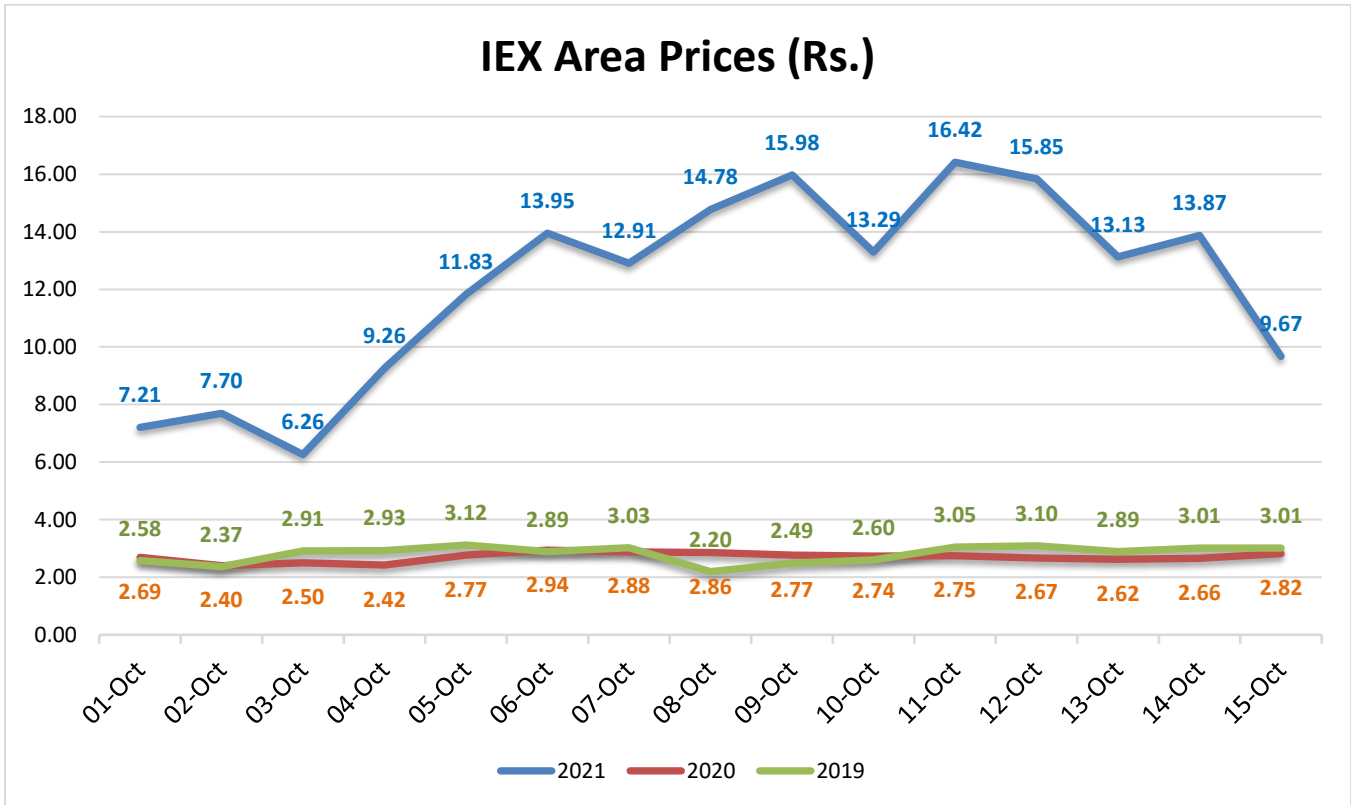
3	35	01.12.2021 to 31.12.2021	18:00 to 23:00	6.55
4	65	01.01.2022 to 31.03.2022	18:00 to 23:00	6.56
UPCL/Short/21-22/RA/47				
1	300	08.10.2021 to 31.10.2021	00:00 to 24:00	6.00-9.88
2	300	01.11.2021 to 30.11.2021	00:00 to 24:00	5.38-7.75
3	300	01.12.2021 to 31.12.2021	00:00 to 24:00	4.90-7.23
BEST/Short/21-22/RA/46				
1	50	16.10.2021 to 31.10.2021	00:00 to 24:00	8.99-11.26
2	50	16.10.2021 to 31.10.2021	10:00 to 17:00	9.99
3	50	01.11.2021 to 30.11.2021	00:00 to 24:00	6.75-8.11
4	50	01.12.2021 to 31.12.2021	00:00 to 24:00	5.50-8.11
5	100	01.12.2021 to 15.12.2021	10:00 to 17:00	8.68
Torrent Power Limited/Short/21-22/RA/48				
1	150	16.11.2021 to 30.11.2021	00:00 to 24:00	7.60-10.23
2	250	16.11.2021 to 30.11.2021	06:00 to 22:00	7.90-10.74
3	100	01.12.2021 to 31.12.2021	00:00 to 24:00	7.60-7.90
4	100	01.12.2021 to 31.12.2021	06:00 to 22:00	7.90-10.23
5	125	01.01.2022 to 31.01.2022	06:00 to 22:00	7.90-10.23
6	100	01.02.2022 to 28.02.2022	00:00 to 24:00	4.90-5.06
7	200	01.02.2022 to 28.02.2022	07:00 to 22:00	7.9
8	200	01.03.2022 to 31.03.2022	00:00 to 24:00	5.06-7.90
9	250	01.03.2022 to 31.03.2022	07:00 to 24:00	7.90-10.23
PSPCL/Short/21-22/RA/50				
1	300	16.10.2021 to 31.10.2021	06:00 to 18:00	-
2	200	01.11.2021 to 30.11.2021	06:00 to 18:00	12.00-15.00
3	350	01.12.2021 to 31.12.2021	06:00 to 18:00	12.00-15.00
4	350	01.01.2022 to 31.01.2022	06:00 to 18:00	11.00-15.00
5	250	01.02.2022 to 28.02.2022	06:00 to 18:00	11.00-15.00
6	200	01.03.2022 to 31.03.2022	06:00 to 18:00	11.00-15.00
7	300	16.10.2021 to 31.10.2021	07:00 to 17:00	-
8	200	01.11.2021 to 30.11.2021	07:00 to 17:00	12.00-15.00
9	400	01.12.2021 to 31.12.2021	07:00 to 17:00	12.00-15.00
10	400	01.01.2022 to 31.01.2022	07:00 to 17:00	11.00-15.00
11	300	01.02.2022 to 28.02.2022	07:00 to 17:00	11.00-15.00
12	200	01.03.2022 to 31.03.2022	07:00 to 17:00	11.00-15.00
13	300	16.10.2021 to 31.10.2021	07:30 to 17:30	9.83
14	300	01.11.2021 to 30.11.2021	07:30 to 17:30	08.80-12.00
15	300	01.12.2021 to 31.12.2021	07:30 to 17:30	07.77-12.00
16	300	01.01.2022 to 31.01.2022	07:30 to 17:30	07.77-11.00



17	300	01.02.2022 to 28.02.2022	07:30 to 17:30	07.77-11.00
18	300	01.03.2022 to 31.03.2022	07:30 to 17:30	07.77-11.00

Source

IEX Price Trends



Commodity Price Indices

Name	Description	Unit	Price
Australian Thermal Coal	Calorific Value- 6,300 kcal/kg (11,340 btu/lb), less than 0.8%, sulphur 13% ash; previously 6,667 kcal/kg (12,000 btu/lb), less than 1.0% sulphur, 14% ash	USD/ MT	185.69
Coal, Indonesia	Coal Indonesia	USD/ MT	92.41
Coal, Colombia	Colombian Coal	USD/ MT	83.44
Crude Oil (Petroleum)	Crude Oil (petroleum), simple average of three spot prices; Dated Brent, West Texas Intermediate, and the Dubai Fateh, US Dollars per Barrel	USD/Barrel	72.80
Diesel	New York Harbor Ultra-Low Sulphur No 2 Diesel Spot Price	USD/Gallon	2.57
Heating Oil	New York Harbor Conventional Gasoline Regular Spot Price FOB	USD/Gallon	2.43
Natural Gas	Natural Gas, Natural Gas spot price at the Henry Hub terminal in Louisiana, US Dollars per Million Metric British Thermal Unit	USD/MMBTU	5.542
Jet Fuel	U.S. Gulf Coast Kerosene-Type Jet Fuel Spot Price FOB	USD/Gallon	2.33

(Source: ICMW METI Bloomberg Index Mundi)

Weather (Estimated for next fortnight)

City	Max Temp	Min Temp	Precipitation (Probability)
DELHI	27	13	1%
MUMBAI	32	26	22%
KOLKATA	31	22	9%
CHENNAI	30	25	50%

(Source - Accuweather)

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