TATA POWER

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TPTCL'S E-NEWS LETTER

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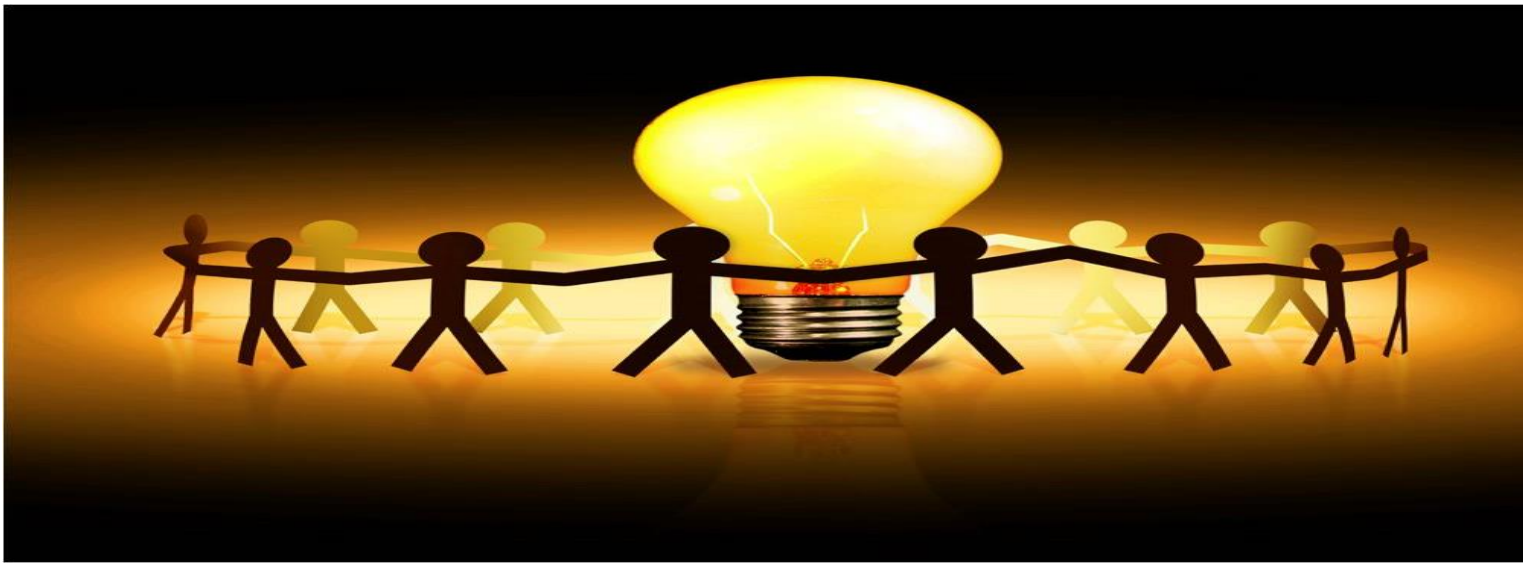
Tata Power Trading Company Limited (TPTCL)



Lighting up Lives!

Power Market News

Power demand in India expected to grow 6% in FY22: Icra

NEW DELHI : Demand for electricity in India is expected to grow 6% in 2021-22 as compared to the previous fiscal year, rating agency Icra said. It has also estimated power generation capacity addition at 17- 18 GW for the ongoing fiscal year. "ICRA Ratings has estimated the all India electricity demand growth at 6.0% for FY2022 on a year-on-year (YoY) basis, considering the favourable base effect, relatively lesser impact of the second wave on electricity demand and the pick-up in the vaccination programme," an Icra statement said.
The electricity demand slowed down during the first two months of 2021-22 compared to March 2021 amid lockdowns imposed by state governments to control the second wave of Covid-19, it said. Nonetheless, with the slowdown in fresh Covid-19 infections from the second half of May 2021, state governments eased lockdown restrictions and this in turn improved the electricity demand growth prospects as seen in June 2021, with a month-on-month growth of 3.9%, it stated.

However, it added that any resurgence in infections leading to lockdown restrictions would remain a key downside risk for the demand. Further, Icra said it expects the all-India power generation capacity addition to rebound to 17-18 GW in the year, increasing by 45% YoY from 12.8 GW in 2020-21, mainly led by the renewable energy (RE) segment backed by a strong pipeline of 38 GW projects under development.

The RE segment would remain the main driver of capacity addition with a share of more than 60% over the next five years. “While the demand growth prospects remain favourable, the outlook for the thermal generation segment is negative considering the subdued thermal PLFs (Plant Load Factor), lack of visibility in signing of new long-term or medium-term PPAs for thermal IPPs, modest tariffs in short-term power market and continued delays in receiving payments from state distribution utilities," Girish kumar Kadam, Co-Group Head -- Corporate Ratings, Icra, said.

The thermal PLF is expected to remain subdued at 57.0% in 2021-22, despite the expected improvement from 54.5% in 2020-21 led by higher electricity demand, Kadam added. While there has been an improvement in the liquidity position of certain thermal independent power producers (IPPs) with realisation of large payments under the liquidity support scheme in March 2021, the sustainability of the same remains to be seen considering the continued weakness in discom finances.

On the other hand, the credit profile of the central thermal power generation utilities is supported by the presence of long-term power purchase agreements (PPAs) under the cost-plus tariff structure, and strengths arising out of sovereign parentage. The credit outlook for the distribution segment too remains negative, given the high operating inefficiencies, lack of adequate tariff revisions, delays in receiving subsidy payments from state governments and delays in realising electricity dues from government departments, it added.

This has been further exaggerated by the impact of COVID-19 on the electricity demand and collections in 2020-21, it opined. While the demand is expected to recover in the current fiscal year, the discom finances are likely to remain under pressure owing to lack or inadequacy of the tariff revisions, high distribution losses and rising subsidy dependence, it stated.

The median tariff revision based on the tariff orders issued so far for 2021-22 is less than one per cent and the subsidy dependence for discoms at all-India level is estimated at Rs. 1.3 lakh crore, for the year, it added. “The gap between average cost of supply and average tariff for state-owned discoms at the all-India level is estimated to remain high at 70-75 paise per unit in FY2022, though declining from FY2021.

As a result, the discom losses at the all-India level would remain high at more than ₹75,000 crore," Vikram V, Sector Head - Corporate Ratings, Icra said.

Further, the debt on the books of state-owned discoms at all India level is estimated to reach close to ₹6 lakh crore in 2021-22. Such high level of liabilities (debt plus dues to gencos) is unsustainable for discoms. In this context, the rapid implementation of reforms in the distribution segment is essential for the power sector, Vikram added.

The government has recently approved a new scheme for reviving the distribution sector with an overall outlay of ₹3.03 lakh crore, covering improvement of operational efficiencies through smart metering, upgradation of distribution infrastructure and solarization of agriculture feeders.

However, it said the timely implementation by state governments and discoms will remain critical. On the other hand, the credit profile of several privately-owned discoms remains healthy supported by superior operating efficiencies, favourable demographic profile and more-timely pass-through of cost variations to consumers, it stated.

Also, Icra's outlook for the RE segment is stable, because of factors such as continued policy support from the government, large growth potential, the presence of creditworthy central nodal agencies as intermediary procurers and tariff competitiveness. Further, the outlook for the transmission segment is stable supported by the presence of availability-linked payments and timely realisation of payments for the inter-state projects as the billing and collections are handled by the central transmission utility. *Source*

At least nine firms eye taking over power distribution business in Puducherry

At least nine firms, including Italy's Enel Group, the Adani Group owned by billionaire Gautam Adani, Torrent Power Ltd, Greenko, ReNew Power Ventures, Sterlite Power, and state-run NTPC Ltd, are interested in taking over the electricity distribution functions of Puducherry, according to two people aware of the development.

The other firms eyeing the electricity distribution privatization plan of Puducherry are Kolkata-based RP-Sanjiv Goenka group's CESC Ltd and Tata Power Co. Ltd. The request for proposal (RFP) is likely to be floated next month.

Deloitte is running the sale process for the Puducherry electricity department with the electricity distribution company (discom) to be carved out before the handover.

The plan has been referred to the Union home ministry after facing opposition. Unlike discoms run by state governments, discoms for Union territories are administered by the Centre. "The decks have been cleared. A meeting of the empowered committee is expected to be called shortly. The committee will also have a central government representative and will decide upon floating the RFP for divesting 100% stake," said one of the two people mentioned above requesting anonymity.

Mint reported earlier about India's plan to privatize electricity discoms in Union territories. India is working to privatize discoms for eight Union territories, the plans for which were articulated by Union finance minister Nirmala Sitharaman when she announced the fourth tranche of the ₹20 trillion stimulus package to tackle the economic crisis that followed the coronavirus outbreak. A Deloitte spokesperson in an emailed response said, "We are bound by confidentiality obligations and are unable to comment on client-specific matters."

An Adani Group spokesperson in an emailed response said, “As a part of the company’s business growth strategy, we continue to evaluate various viable options. The company, however, does not comment on speculation." Spokespersons for Enel Group and Sterlite Power declined comment. Queries emailed to the spokespersons for the ministries of home affairs and power, Torrent Power, Greenko, ReNew Power Ventures, NTPC Ltd, CESC Ltd and Tata Power Co. late remained unanswered. *Source*

Five grid islanding schemes under implementation, two proposed

A total of five grid islanding schemes are currently under development while two others have been proposed, according to information provided by Central Electricity Authority (CEA). A report by CEA on Grid Islanding suggests that till late 2020, a total of five grid islanding schemes—one each in the Northern and Southern region, and three in the eastern region—were under implementation as of late 2020. Besides, one scheme in the Northern region and one in the Western region, are in proposal stage. The Northeastern Region has no islanding scheme—either operational or proposed.

Currently, India has a total of 28 grid islanding schemes, which includes 21 under operation and the aforementioned seven that are either under implementation or proposed. The concept of grid islanding assumed national importance after the major grid disturbance of July 2012. Out of the 21 islanding schemes currently under operation, as many as 13 were commissioned after the major grid failure of July 2012.

The CEA report explained that Grid Islanding or simply “Islanding” is a defence mechanism as a final stage in which a part of the system is islanded (or isolated) from a disturbed grid so that if healthy, this subpart could survive in isolation from the rest of the grid. The basic objective of an islanding scheme is to avoid a total blackout, and quicker restoration of a failed grid.

The report also cautioned that having a very large number of islanding schemes may not be in the interest of secure and integrated operations of the grid. “Opening of a large number of elements simultaneously may trigger mal-operation and the islanding scheme itself could become a cause of grid disturbance,” the report said.

Bangalore and Hyderabad

In a meeting on grid islanding in December 2020, the Union power minister, R.K. Singh, had raised a query regarding islanding schemes for Hyderabad and Bangalore. In reply, the CEA explained that while Hyderabad city was covered under the Ramagundan Islanding Scheme, there was little scope for developing islanding for Bangalore as there was no power generation plant in the vicinity of the city. Subsequently, the Southern Region Power Committee (SRPC) was advised to design an islanding scheme for Bangalore and ensure its quick implementation.

Grid resilience

POSOCO Ltd, which also participated in the meeting, explained that the focus has now shifted from grid islanding to grid resilience. A resilient grid recognizes that systems can fail locally but can be quickly revived through black-start resources (bottom-top approach) or by extending supply from healthy parts of the system (top-bottom approach).

Major cities

The power minister urged that islanding schemes should be designed for all major cities. If there is need to establish a power plant in or around a city (as is the case with Bangalore, as discussed above), the proposal of the same must be submitted to the power ministry for consideration.

Schemes under implementation

The five grid islanding schemes currently under implementation include Unchahar Islanding Scheme. This scheme is in the Northern Region and will cater to a total load of 760 mw covering 50 per cent of Lucknow, Raibareily and Fatehpur, all in Uttar Pradesh. In the Southern Region, the Simhadri Islanding Scheme is advanced stage of completion. The remaining five schemes—all in the Eastern Region—include Chadrapura, MTPS and IB TPS. All these schemes are expected to be commissioned by December 2021. The two islanding schemes proposed pertain to the Kashmir Valley Region, and the UT of Dadra Nagari Haveli and Daman & Diu (DNHDD).

Major Grid Outages

Two major grid failures in recent history include that on July 30 and 31, 2012 that mainly affected the Northern Grid and that on October 12, 2020, affecting the Western Grid. *Source*

DERC asks Power Ministry to deallocate Delhi power share from NTPC Dadri

Delhi electricity regulator has written to the Union power ministry seeking deallocation of share of two BSES discoms in the state from NTPC's Dadri I unit. The Delhi Electricity Regulatory Commission (DERC) has sought permanent reallocation "on urgent basis entire Delhi's share of Dadri-I generating station of NTPC to other needy states w.e.f 1st December, 2020 to avoid the burden of fixed cost without any power scheduled to end consumers of Delhi."

The letter comes after the power ministry allowed BSES Delhi discoms to exit power purchase agreement with NTPC's Dadri-I unit, in a first of its kind move that is likely to trigger many such requests. Delhi regulator had also written to the ministry in March this year requesting deallocation of entire 756 Mw quantum of Delhi share from Dadri-I. It said the optimisation of power purchase cost of Delhi will benefit power consumers.

In a clarification issued, the power ministry said distribution companies can exit entire allocation from a particular project after completion of 25 years. "In case of bulk power supply agreement also, the state/discoms may relinquish entire allocated power from such projects which have completed 25 years since commissioning of the project," the clarification said.
Reliance Infrastructure-led BSES had said the move will allow BSES discoms to source cheaper and green power for consumers of Delhi. Earlier, power industry regulator Central Electricity Regulatory Commission allowed BSES Delhi distribution companies - BSES Rajdhani Power Ltd (BRPL) and BSES Yamuna Power Ltd (BYPL) - to exit the power purchase agreement.

CERC had asked the Delhi discoms to approach the Union power ministry for relinquishment of their allocations. BRPL and BYPL had stopped scheduling power from Dadri -I plant of NTPC in November 2020, upon completion of the plant's 25 years of operation and had sought exit from Dadri-I plant. Under power ministry guidelines issued in March, discoms have the right to either continue or exit a power purchase agreement (PPA) after completion of 25 years from commercial operation date (COD). NTPC

had, however, denied exit to BSES discoms saying there is no specific clause in the PPA. The discoms approached CERC on this issue.

Power distribution companies in Delhi have been seeking to surrender PPAs with state and Centre-run plants citing high costs. Central generating stations, whose power gets relinquished by states, would be free to sell power through short- and medium-term contracts, in the power exchanges or reallocate the power to willing buyers.

Old PPAs consist mostly of those between discoms and power plants of NTPC, NLC India, Damodar Valley Corp and state generation companies, industry insiders said. The ministry guidelines are expected to pave way for surrender of completed contracts with state power plants too, they said. Earlier there was a condition on discoms of exit from all the PPAs in a basket. The ministry has now permitted an option to exit from the PPAs one by one. *Source*

Centre may introduce annual service-based ratings for power utilities

The Centre would introduce an annual service-oriented rating programme for power utilities that would be ranked on metrics such as duration and quality of electricity supplies, billing and collection efficiency, and grievance redressal. REC is the nodal agency for the programme assessing customer centricity. "The government feels we should have consumer service ratings of distribution utilities that should be consumer-centric," a senior government official told ET. "The idea is to start measuring the services and their quality. Also, this makes the discoms realise where they stand in terms of quality and make them answerable on performance to the public at large,"

Multiple rounds of stakeholder consultations have been held with several discoms, including private distribution utilities and sectoral institutions like the Council on Energy, Environment and Water (CEEW), Prayas Energy group and Smart Power India. "We have also had interactions with the World Bank to study the 'ease of doing business' model. We have evolved a rating framework for consumer ratings and target to bring out the first report by September this year," the official said.

Supply reliability or uninterrupted quality power is the most important parameter of the rating. The second metric would be performance on services the consumer needs - ease and speed in new connections, metering efficiency, transparency and accuracy. Efficiency - and accuracy - in billing will be the third parameter. "Getting correct bills in time is a challenge that most power consumers face in places other than cities like Mumbai and Delhi," the official said.

The ratings would also measure consumer convenience in making bill payments. The grievance redressal system at power distributors would also be a major measuring component of the consumer rating system. The amount of time taken to respond to consumer complaints and action taken would be considered. Discoms sending timely SMS alerts to consumers on outages, issuance of bills and due date reminders will rank higher in the rating.

"The rating programme will also set the benchmark for each parameter for discoms and comparison with other utilities to help them understand the areas of improvement. The ratings will drive them to improve services," the official said. Power Finance Corp, the holding company of REC, publishes annual integrated ratings of all the state-run distribution companies in the country, evaluating their financial performance. Started in 2012, the rating assigns scores to the discoms on operational and reform parameters like commercial losses, revenue gap and filing of tariff petitions. *Source*

India's peak electricity demand crosses 200 GW

NEW DELHI: India's peak electricity demand surged beyond the 200-gigawatt (GW) mark, registering a new record. With the unabated rise in mercury and a large part of the country yet to receive monsoon showers, India's peak electricity demand has been on an upward trajectory setting new records every day.

The last all-time peak power demand of 197.06 GW was recorded on 7th July 2021, which was preceded by a high of 191.24 GW on 30 June last month. Before that, India had recorded a peak power demand of 189.64 GW on 31 January this year. This comes in the backdrop of India's peak electricity demand falling during second wave, that has revived now.

"All India power-demand crossed 200 GW at 1201 hrs today," the office of power and new renewable energy minister Raj Kumar Singh said in a tweet. This assumes importance given that energy consumption, especially electricity and refinery products, usually linked to overall demand in the economy. Of India's total electricity demand load pattern, industrial and agricultural consumption account for 41.16% and 17.69%, respectively. Commercial electricity consumption accounts for 8.24%.

The Cabinet Committee on Economic Affairs (CCEA) has approved the marquee ₹3.03 trillion power distribution company (discom) reform scheme. The reforms are aimed at improving reliability and quality of power supply. India is working on its energy transformation plan that involves a raft of green measures including clean electricity, ethanol blending with fossil fuels, green mobility, battery storage and green hydrogen to help reduce pollution and facilitate commitments made at COP-21, the UN Climate Change Conference held in France in 2015. *Source*

Tata Power ties up with California-based Auto Grid for AI based energy management

Tata Power Delhi Distribution (Tata Power-DDL), that supplies electricity to North Delhi has partnered with California-based AutoGrid for deploying artificial intelligence based smart energy management system. The firms have launched "a unique Incentive linked Behavioural Demand Response program to support effective utilization of Smart Meters and reduce network management cost."

This comes in the backdrop of the Cabinet Committee on Economic Affairs (CCEA) approving the marquee ₹3.03 trillion power distribution company (discom) reform scheme that involves a compulsory smart metering ecosystem across the distribution sector—starting from electricity feeders to the consumer level, including in about 250 million households.

"Tata Power-DDL and AutoGrid are jointly launching a behavioural demand response program for company's residential customers to reduce peak demand and network capital costs. This pilot project aims to empower customers, by helping them understand their consumption patterns and evaluate the effectiveness of demand response (DR) programs," the firms said in a joint statement.

"In the first phase, the program will be initiated for a period of 3 months, from 1st July to 30th September 2021 with 4,000 residential consumers with smart meter connections," the statement added. This comes at a time when only 57 towns in the country have supervisory control and data acquisition (Scada) systems. The union government' plan is to have Scada in all urban areas and distribution management system (DMS) in 100 urban centres.

"Behavioural Demand Response is regarded as an essential component as it helps build up the necessary flexibility on demand side to match the flexibility on supply side. Through this pilot program, we intend to give more control in the hands of the consumers," said Ganesh Srinivasan, CEO, Tata Power-DDL in the statement. This also comes at a time when electricity demand in the national capital has been growing. The other discoms in Delhi are BSES Rajdhani Power Ltd (BRPL), BSES Yamuna Power Ltd (BYPL), Military Engineering Services (for Delhi Cantonment) and the New Delhi Municipal Corporation.

"Demand Response (DR) is a powerful alternative by which utilities can reduce stress on the grid during peak periods while providing customers economic and environmental benefits. DR programs aim to reduce or shift energy consumption from peak hours of the day to leaner demand periods by offering incentives to the consumers for their cooperation. Participating customers can stay in control of their consumption, and voluntarily choose to turn down non-essential loads to reduce total load at peak times. In this way they will also be able to optimize their monthly electricity bills," the statement said. *Source*

Sales volume jumps 48% to 7,093 MU in June at IEX

The Indian Energy Exchange (IEX) recorded 48 per cent increase in its power trade volume at 7,093 million units in June compared to the same month a year ago. Cumulatively, for the first quarter of 2021-22, the Exchange market witnessed a robust performance despite the COVID-induced restrictions, IEX said in a statement. The electricity market achieved a volume of 21,340 million units (MU) during the first quarter (April-June), registering 44 per cent growth year-on-year.

Amid growing power consumption in the country, distribution utilities and industries are increasingly relying on IEX electricity market to source power in the most competitive, efficient, sustainable, and flexible manner, it stated. The day ahead market (DAM) traded 4,314 MU volume in June 2021 with the average monthly price at Rs 3.06 per unit. The sell bids at 2 times of the cleared volume during the month ensured ample availability of power and discovery of competitive prices thereby providing optimization opportunities to the distribution utilities. In the first quarter of 2021-22, DAM traded 14,377 MU and registered 7 per cent growth as compared to the year-ago period.

The term-ahead market (TAM) comprising intra-day, contingency, daily & weekly contracts traded 641 MU during the month, recording multi-fold growth year-on-year. Cumulatively, in the first quarter, TAM traded total 1,372 MU and registered 54 per cent year-on-year growth. The real-time electricity market continued to show exceptional performance with the highest ever monthly volumes of 1,726 MU at an average monthly price of Rs 3.02 per unit. The trade volume saw a significant 235 per cent year-on-year growth and 20 per cent month-on-month.

The market also recorded highest ever volume in a single day with 80 MU traded on June 22. In the first quarter, the market did a cumulative trade of 4,635 MU. The consistent growth of real-time electricity market is an indication of growing reliance of distribution utilities and industries on the market to address their power demand-supply balancing in real time at competitive prices. The green term-ahead market also saw the highest ever monthly volume being traded in June 2021. With a volume of 412 MU during June 2021, the market saw 15 per cent growth over the previous month led by the ongoing wind season. For the first quarter, the market registered a cumulative trade volume of 955 MU, already surpassing the total green volumes achieved in 2020-21.

The market is witnessing a growing increase in participation and has become a key facilitator of green power trade among distribution utilities, industrial consumers, and green generators offering the most competitive and viable avenue. Total 49 participants participated during the month. Distribution utilities from West Bengal, Bihar, Haryana, Telangana, Karnataka, Uttar Pradesh, Goa, Maharashtra, Daman & Diu, Assam and New Delhi were key participants. *Source*

In a first, Coal India sends fuel to Bangladesh power plant

New Delhi: In a first, state-run Coal India Ltd (CIL) has sent 4,000 tonnes of coal to Bangladesh for its Khulna power project, as part of India's strategy to play a key role in creating a new energy security architecture for its neighbours. The 1,320 megawatts (MW) Khulna project has been built recently in a joint venture by India's NTPC Ltd and Bangladesh Power Development Board (BPDB).

This comes in the backdrop of CIL lifting the embargo on coal exports under its e-auction sales policy. Now coal purchasers, including traders, can export the coal bought through this route. This assumes significance given that CIL is India's largest coal miner, with the allocation under spot e-auction and special spot e-auction accounting for 46 million tonnes (mt) of coal in FY21.

"In less than a month of Coal India Limited (CIL) tweaking its e-auction coal sale policy, lifting the restriction on export of its coal procured by domestic coal purchasers under two e-auction windows, the first coal laden rake left for Bangladesh on 2 July. One rake of coal consists around 4,000 tonnes. This is for the first time that coal was exported after the policy amendment," CIL said in a statement. India has been supplying electricity to Bangladesh, with the power-starved neighbouring country exploring all options including wheeling power from projects being set up in India across the fuel sources including solar to help meet its energy demands.

"The destination of below 2200 gross calorific value coal purchased under spot e-auction from Dahibari siding of Bharat Coking Coal Limited (BCCL), the Jharkhand based coal producing subsidiary of CIL is Rampal Power Station, Khulna, Bangladesh. This falls under Maitree Super Thermal Power Project - a joint venture between the Indian power producer NTPC Limited and Bangladesh Power Development Board," the statement added.

Cross-border energy trade is a key part of PM Narendra Modi's South Asia-focused neighbourhood-first policy. The government has set up a high-level group headed by former Union power secretary Ram Vinay Shahi and tasked it with helping build a South Asia-focused energy security architecture, as reported by Mint earlier. India and Bangladesh already have a power transmission link, that is helping meet electricity demand in Bangladesh. "The Bangladesh bound coal left the Indian shore from Syama Prasad Mookerjee Port, Kolkata, the sea route which links India and Bangladesh," the statement said.

Speaking at *Mint's* annual energy conclave in March last year, power and new and renewable energy minister Raj Kumar Singh had said it is his aim to have a regional power grid that includes Myanmar,

Bhutan, Bangladesh, Nepal and Sri Lanka. The proposed market, which will include these countries, could aid regional peace and improve utilization of generation assets—including the stranded assets in India—and efficient price discovery. India is already moving ahead with its ambitious global electricity grid plans to roll out a “One Sun, One World, One Grid" (OSOWOG).

CIL is India’ largest coal miner with a coal production target of 670 mt for the current financial year. India’s overall coal requirement is expected to go up to 1,123 mt by 2023 from the present level of 700 mt. “For April-June’21 quarter CIL has allocated 6.7 million tonnes (MTs) of coal under spot e-auction which is nearly one-fourth of the entire booked quantity of 27.3 MTs, fetching the company 30% add-on over the notified price. For the comparable period last year, the add-on was 16% under spot e-auction," the CIL statement said. With global shift to green energy to address growing environmental concerns, the Indian government is pulling out all stops to harness coal reserves within the next three decades. India has the world’s fourth largest reserves and is the second-largest producer of coal. *Source*

Sales volume in IEX real-time power market jumps 3-fold in June

New Delhi, Jul 4 (PTI) Sales volume of real-time power market (RTM), which allows consumers to buy power just one hour before delivery, jumped over three-fold to 1,726 million units in June compared to the year-ago month at Indian Energy Exchange (IEX). The RTM was launched last year on June 1, and had witnessed sales of 515 MU in the first month of operation at IEX, according to the data available on the exchange.

Total RTM sale volume from June 2020 to June 2021 was recorded at 14,104 million units while it was 60,384 million units for Day Ahead Market (DAM). According to the IEX data, the average monthly price of the RTM remained lower than that of the day ahead market (DAM) or at same level (of DAM) during the period from June 2020 to June 2021 except in December 2020.

In December 2020, the average monthly clearing price of RTM was Rs 2.9 per unit while it was Rs 2.8 per unit for DAM. In the month of July 2020, the average monthly clearing price of RTM, as well as DAM, remained at the same level of Rs 2.5 per unit. Similarly, it was Rs 2.7 per unit for DAM as well as RTM in the months of October and November last year.

The overall average market clearing price of power in RTM was lower at Rs 2.83 per unit from June 2020 to June 2021 compared to 2.97 per unit in DAM. Thus, the RTM proved to be an attractive market for consumers as well as sellers. The RTM enables consumers, including distribution companies (discoms) and captive users, to buy power on exchanges just an hour before delivery. The real-time market is an endeavour to make the power market dynamic by enabling trade in electricity through half-hourly auctions. There are 48 auction sessions during the day with delivery of power within one hour of closure of the bid session.

Rohit Bajaj, Senior Vice President and Head-Business Development, IEX told PTI, “The Real-time electricity market has proved to be a very dynamic market segment at the IEX platform. The response from market participants has been exceptional ever since its launch." In fact, the average power price discovered in RTM is as competitive and in tandem with DAM which is an indication of the fact that the market is liquid enough and has attained a maturity like DAM within a span of one year, he added.

All this has been possible due to the support that the market has provided to the distribution utilities and industrial customers in balancing their demand-supply variations at a short notice of one hour, he explained. Most recently, due to the greater flexibility that it provides in procurement, the real-time market extended critical support to the cyclone Tauktae affected states during the cyclonic disturbances.

Moreover, the market also has an important role to play in seamless renewable integration by managing renewable energy intermittency in an efficient manner, he stated. As more and more participants turn to the real-time market, it will play a pivotal role in ensuring greater efficiency, accelerated green energy adoption and of course, deepening of the energy markets, he opined. *Source*

Discom Distress

The scheme -- Reforms-Linked, Result-Based Scheme for Distribution (RLRBSD) -- will provide assistance to discoms for infrastructure creation, including pre-paid smart metering, feeder separation (supply of electricity to agricultural and non-agricultural consumers) separately and upgradation of systems tied to financial improvements. It targets reducing electricity supply (AT&C) losses to 12-15 per cent, and the gap between cost and revenue to zero by FY25. Unlike in the past, discoms will get their share of grant from the government at the end of the year, only if they achieve their pre-set targets for the year. It is expected to usher in long-pending reforms in a sector reeling under heavy debt and payment overdues.

Coronavirus-induced lockdowns over the past one year have made matters worse. India's power consumption fell for the first time in 35 years to 1271.54 billion units in FY21, since industries could only operate intermittently in many parts of the country after the lockdown was lifted. Already reeling under heavy debt, it came as a bolt from the blue for discoms. The fall in demand was particularly severe in the higher-tariff industrial and commercial segments, which are used to cross-subsidise lower-tariff residential users. According to ICRA Analytics estimates, monthly revenue loss of discoms due to reduced industrial and commercial demand was over Rs 16,000 crore.

It resulted in a surge in overdues. From under Rs 24,000 crore in April 2017, dues to power producers trebled to over Rs 90,000 crore in April 2021. Aggregate debt, which had fallen to around Rs 2 lakh crore in FY17 is estimated to have more than doubled to an all-time high of Rs 4.51 lakh crore in FY21. It is projected to increase further to around Rs 4.87 lakh crore in FY22, according to CRISIL. In absolute terms, it is one of the biggest drags on government resources, far in excess of its annual fertiliser subsidy of Rs 80,000 crore.

"Covid has not helped the situation at all," says Rajesh Ivaturi, Partner, Power and Utilities, EY India. "Lowpaying customer segment (residential) has remained the same or has grown marginally, but the high-paying industrial consumer segment has declined. Discom financials have gone for a toss."

Even by their low standards, these are ominous times for discoms. This is not the first time that the government has tried to rid the system of inefficiencies. From time to time, bailouts have been given. Realising the potential impact of the lockdown on discoms, Sitharaman had announced a Rs 90,000-crore relief package in May last year itself. It was subsequently increased to Rs 1.2 lakh crore and finally to Rs 1.35 lakh crore. Yet, these are only temporary measures aimed at lessening some of the immediate impact of the pandemic. Structural problems in discoms pre-date Covid and need a comprehensive and radical overhaul.

The Failure Of UDAY

The government has tried to fix the problem a number of times. Back in 2001/02, a grid collapse prompted Montek Singh Ahluwalia to work out a bailout package for discoms through long-term bonds issued by state governments. More than a decade later, a similar Northern Grid failure in the summer of 2012 gave way to another relief package -- the Financial Restructuring Plan (FRP). The latest was in 2015 when the ambitious Ujjwal Discom Assurance Yojana (UDAY) scheme was announced.

"The frequency of bailouts has obviously increased. The first one was in 2002, the next one a decade later. Then came UDAY in end 2015 and in 2020 again the government had to come up with a relief package," says Sudhir Kumar, Associate Director, Care Ratings. Discoms' troubles stem from two factors -- their inability to bring down transmission and distribution (T&D) losses and raise tariffs in line with rising costs. Both can impact households in the country and since power is under state control, raising tariff is a political hot potato as well.

Under the UDAY scheme, state governments took over 75 per cent of the accumulated debt of discoms valued at around Rs 4 lakh crore to reduce their interest burden. Power utilities were encouraged to initiate reforms like reducing AT&C (aggregate technical and commercial) losses by 900 basis points to about 15 per cent in 2018/19, and also implement regular tariff hikes of 5-6 per cent per annum.

The reduced interest burden did improve the financial health of discoms in the first few years, but progress on structural reforms was tardy. From high AT&C losses of 25.72 per in FY15, it came down to only 22.01 per cent in FY19, the cut-off year for UDAY, missing the target by a wide 7 percentage points. The gap between average cost of supply (ACS) and average revenue realised (ARR), a key parameter that reflects the health of discoms, also went down initially from 0.84 in FY13 to 0.17 per unit in FY17, but went up thereafter to 0.44 per unit in FY19. Under UDAY, the target was to negate it.

"The main reason is that the tariff they charge from customers is lower than the average cost of power purchase. While some gaps are met through subsidies by state governments and cross-subsidies, there is still some amount that is not compensated by any and sits on discom books as regulatory assets. Further, subsidies are not paid on time by state governments and that adds pressure on discoms to do additional borrowing to meet working capital requirements," says Vibhuti Garg, Energy Economist, Institute for Energy Economics and Financial Analyses. "While discoms need to raise tariffs on an annual basis, many discoms have not raised tariffs for many years, though their costs have gone up, thereby widening the gap between their average cost of supply (ACOS) and ARR," she adds.

Privatisation Drive

One of the most talked about solutions is to privatise more and more discoms in the country. It is an experiment that has yielded positive results in many cities, including Delhi, Mumbai, Kolkata and Ahmedabad. Before it was privatised in 2002, AT&C losses in the national capital were at a high 53 per cent and the government was subsidising discoms to the extent of Rs 12,000 crore every year. After privatisation losses came down, and today Delhi has one of the lowest AT&C losses among discoms in the country at just 8 per cent.

"Delhi is a prime example of how privatisation works in the sector. We have invested in technology and improved service quality. Not just us, private discoms in general have displayed high efficiency standards. Our track record makes for a good case for privatising more discoms in the country. The biggest advantage of privatisation is it brings in greater accountability, which in turn improves efficiency," says Sanjay Banga, President, Transmission and Distribution, Tata Power.

"UDAY did not succeed and anything we do in future should take into account the lessons from it," says Former Chief Economic Adviser Arvind Subramanian. "Privatisation of discoms is definitely one of the ways to solve it, but expectations need to be realistic. The fact of the matter is that the underlying politics of power has not changed significantly."

Everything comes down to making it conducive for discoms to do business through policy certainty and autonomy in pricing decisions. The power connection portability concept that the new RLRBSD scheme seeks to facilitate and for which the prevalent Electricity Act 2003 needs to be amended, would also work only when more players, including from the private sector, join the ring to give more options to consumers. Without these enabling provisions, even privatisation may not work.

"Any model succeeds only when the overall ecosystem is aligned, including regulatory certainty and availability of financial support," says Amal Sinha, CEO, Rajdhani Power. "There should be no discrimination between private and public sector discoms. Give the latter the same level of freedom and they will do well too." One of the potential solutions that has gained currency in recent times is direct transfer of subsidy into bank accounts of consumers. Increased penetration of formal banking through Jan Dhan accounts in the society makes it, at least theoretically, a plausible alternative. This can open the doors for discoms to raise tariffs.

"Entitlements are difficult to do away with -- power subsidy for agri sector has to be given. Around 100 units for households are required. We should look at eliminating subsidies and replacing them with cash transfer," says former bureaucrat Ajay Shankar who played a key role in the enactment of the Electricity Act 2003. "We should not shy away from privatisation, especially in states where governance is weak. Also, multiplicity of tariff has to be done away with."

Cross-subsidy acts as a double whammy for discoms. Supplying power to industrial consumers is cheaper than to agricultural or residential users, yet the tariff is the highest for them. For the latter, cost for discoms is high but tariff is low, leaving them with no other choice but to squeeze industrial consumers. "It makes manufacturing in the country uncompetitive," says R.C. Bhargava, Chairman of Maruti Suzuki India Ltd. "India has one of the highest rates of industrial power in the world. It undermines our aspiration to become a manufacturing superpower." But unlike LPG, implementing direct cash transfer for power may not be easy. "It will be difficult as it is a different ballgame in the power sector compared to LPG," says Shubhadeep Sen, Chief Financial Officer, Gujarat Urja Vikas Nigam. "It is a good proposal, but I don't think the government will do it. It is not very practical as of now."

Smart Metering

The use of technology can help solve some of the sticky issues. Electricity billing is one of the few services where collection happens after consumption, compared to advance payments like in the case of petrol or LPG. Prepaid meters are one of the ways in which this can be reversed. It will reform billing and collection procedures as well. Smart meters are an intrinsic part of the government's RLRBSD scheme, where there is a grant of 15 per cent of the cost (capped at Rs 900) for every smart prepaid meter.

Already, thousands of such meters have been installed across the country and the results are encouraging. In a state like Bihar, for example, which has a high 42.34 per cent AT&C loss ratio, state-run Energy Efficiency Services has installed 25,000 smart prepaid meters. This has resulted in daily recharge revenue of Rs 5 lakh for the discom. More than 60 per cent consumers are recharging their credit balance through mobile application, with Rs 20 per day on an average.

Bihar is not a one-off case. All other states where smart meters have been installed have shown handsome results, with an average 25 per cent increase in billing and 95 per cent rise in billing efficiency. Even in the New Delhi Municipal Council (NDMC) area, which already has a high billing efficiency of over 99 per cent, revenue has gone up by Rs 500 per month per meter. EESL says it could amount to an additional revenue of Rs 1 lakh crore annually. According to CRISIL, an investment of Rs 65,000 crore is needed for the full transition from traditional to smart meters in the country.

"The situation has served to reinforce the efficacy of smart meters by eliminating manual interventions," says Saurabh Kumar, Executive Vice chairperson, EESL Group. "The benefits of smart metering, beginning with a seamless online billing process, real-time tracking of electricity usage, and reduction of billing errors have cascaded down the energy value chain to consumers. It has translated into energy and capital savings for consumers while leading to enhancement of operational efficiency for utilities."

Sun To The Rescue

While smart prepaid meters can help solve one part of the problem, of errant billing and collection, the other aspect of high cost can be partially solved by renewable power, especially solar. In the latest solar auction in December last year, India's solar power cost, already the lowest in the world, hit a new low of Rs 1.99 per unit. Just a month before, prices had come down to Rs 2 per unit. With this, solar power cost in India has more than halved in the last six years from Rs 4.53 per unit in 2015. This has put other sources of power like thermal, in the shade -- solar power costs are 30 per cent lower.

A low-cost robust solar panel manufacturing industry in India will lead to lower cost of power for discoms. Most of India's fresh investments in the power sector are skewed towards renewable energy. The Central Electricity Authority's (CEA's) optimum generation mix report projects India's solar and wind to form 420 gigawatt (GW) of capacity, or 51 per cent of the total installed capacity, by 2030. The International Energy Agency (IEA) has predicted that by 2040 India is likely to add 900 GW of renewable capacity.

As the share of solar power increases, the cost for discoms will come down. So will the ACS-ARR gap. Investments in solar power have also proven to be more resilient. According to a study by CRISIL, power generation across 75 solar projects (with track record of more than three years) was better than estimates in 80 per cent of the cases.

It is one of the reasons that after the initial slowdown in capacity addition in solar during the lockdown in FY21, investments rebounded from October 2020 and are expected to gain further momentum going forward. According to ICRA, the sector added 5.9 GW of capacity in the first 11 months of FY21, which is expected to increase to 7.5-8.0 GW by March 2021. The segment remains the key driver of capacity addition in the RE sector and has surpassed wind power capacity for the first time in January 2021, it said.

For solar to work, it is important to build battery storage. Solar generation peaks during afternoon hours when demand is low on the grid. Batteries help store excess power and supply it during peak demand hours at night. Much like how solar floodlights work in cricket stadiums.

The cost of lithium-ion derived battery storage technology is also reducing like the cost of solar power. The cost of standalone lithium-ion battery systems globally has fallen from $1,100/kWh in 2010 to $137/kWh in 2020. It is projected to decline further to $58/kWh by 2030. In April 2020, the Lawrence Berkeley National Laboratory (LBNL) in the US estimated the total capital cost for a 1MW/4MWh standalone battery system in India at $203/ kWh in 2020, projected to hit $134/kWh in 2025 and $103/ kWh in 2030. When co-located with solar PV systems, the storage capital cost would be lower -- $187/kWh in 2020, $122/kWh in 2025 and $92/kWh in 2030.

Fortunately, India's battery storage capacity is growing. IEA's India Energy Outlook 2021 has predicted that by 2040 India may have 140-200 GW of battery storage capacity, the largest for any country. But, there are a few headwinds as well. The fall in prices in every subsequent auction has a side-effect of many discoms deferring signing of Power Sale Agreements (PSA) with solar producers, hoping for a

lower price. According to established practice, Solar Energy Corporation of India (SECI) acts as an intermediary, signing PSAs with developers before drawing up PSAs with discoms. However, SECI is finding it hard to get discoms to sign along the dotted line. Projects worth nearly 20 GW are in a state of limbo with solar-plus manufacturing tenders accounting for 63 per cent and plain vanilla solar tenders another 17 per cent.

"There are solutions available for each problem, but the major ingredient in all of them is strong political will," says Kumar of Care Ratings. "Some of the steps like raising tariffs and doing away with cross-subsidies would be painful in the short term, but need to be taken. The pandemic has offered the chance for some of the long-pending reform measures to be implemented boldly. That is the only way." A combination of low-cost renewable energy, use of technology in smart prepaid meters with a liberal dose of privatisation can potentially break the high debt trap for discoms. It is up to policymakers to exploit the opportunity with conviction to see it through its logical conclusion. *Source*

Transmission charges payable by DICs for the billing month of Aug'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	47.80
2	UP	NR	51.51
3	Punjab	NR	52.04
4	Haryana	NR	68.16
5	Chandigarh	NR	40.56
6	Rajasthan	NR	56.32
7	HP	NR	38.04
8	J&K	NR	40.64
9	Uttarakhand	NR	52.91
10	Gujarat	WR	40.38
11	Madhya Pradesh	WR	41.67
12	Maharastra	WR	45.65
13	Chattisgarh	WR	35.20
14	Goa	WR	42.90
15	Daman Diu	WR	41.12
16	Dadra Nagar Haveli	WR	44.63
17	Andhra Pradesh	SR	50.10
18	Telangana	SR	37.78
19	Tamil Nadu	SR	40.02
20	Kerala	SR	39.55
21	Karnataka	SR	40.86

22	Pondicherry	SR	37.00
23	Goa-SR	SR	33.81
24	West Bengal	ER	43.08
25	Odisha	ER	46.18
26	Bihar	ER	48.32
27	Jharkhand	ER	46.52
28	Sikkim	ER	36.32
29	DVC	ER	44.99
30	Bangladesh	ER	35.05
31	Arunachal Pradesh	NER	40.76
32	Assam	NER	41.78
33	Manipur	NER	37.53
34	Meghalaya	NER	35.54
35	Mizoram	NER	38.28
36	Nagaland	NER	58.82
37	Tripura	NER	44.25

Click source for other region POC charges. (Source- CERC)

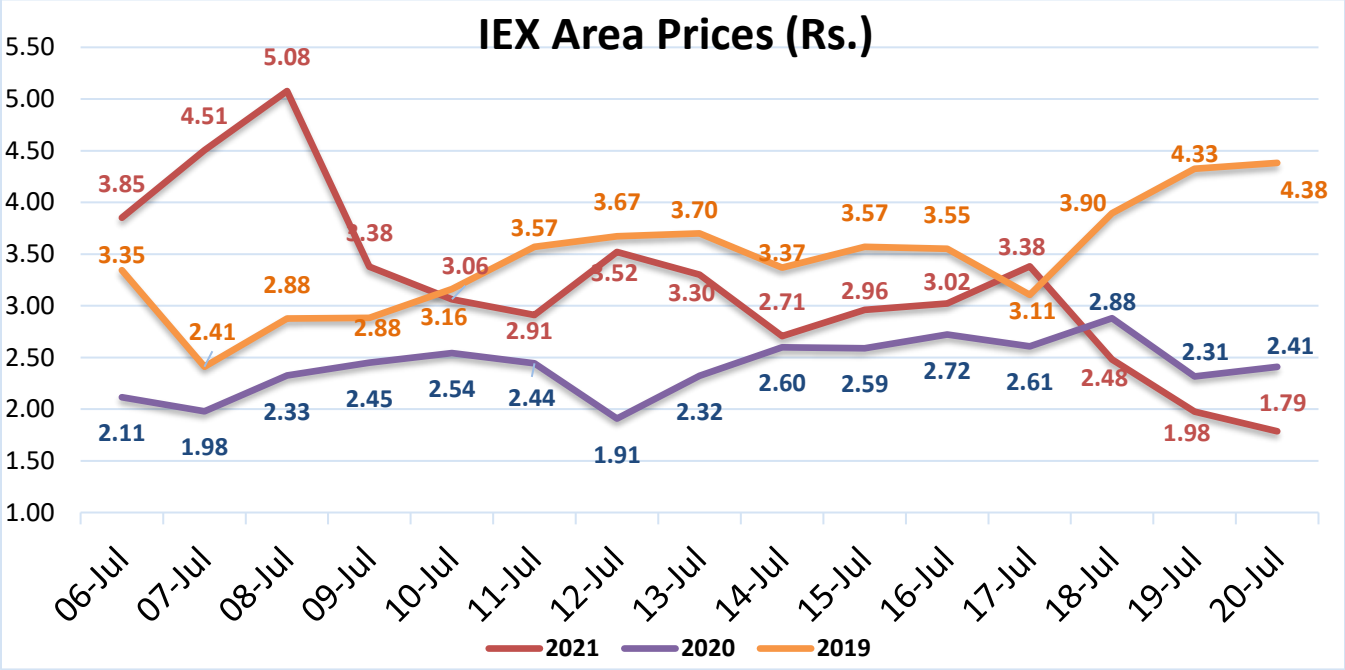
Bilateral Power Market

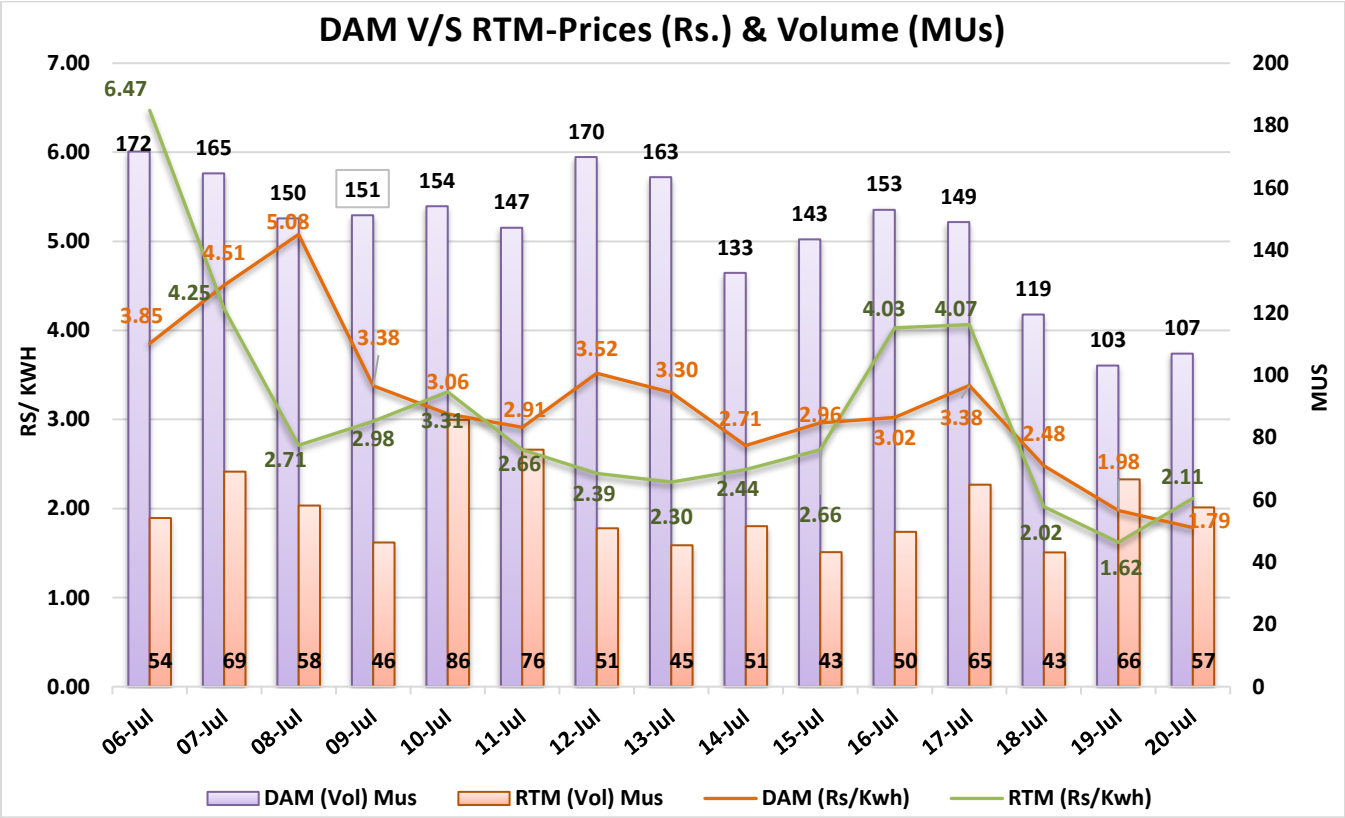
Result of various tenders:-

NUPLLP/Short/21-22/RA/17				
Sl. No.	**Quantity(MW)**	**Period**	**Time Block (Hrs.)**	**Price (Rs./KWh)**
1	3	01.10.2021 to 30.06.2022	00:00 to 24:00	3.59
CESC/Short/21-22/RA/18				
Sl. No.	**Quantity(MW)**	**Period**	**Time Block (Hrs.)**	**Price (Rs./KWh)**
1	36	28.08.2021 to 26.08.2022	00:00 to 24:00	2.99
PSPCL/Short/21-22/RA/20				
Sl. No.	**Quantity(MW)**	**Period**	**Time Block (Hrs.)**	**Price (Rs./KWh)**
1	500	01.08.2021 to 31.08.2021	00:00 to 24:00	4.06
2	300	01.08.2021 to 31.08.2021	00:00 to 03:00	-
3	300	01.08.2021 to 31.08.2021	19:00 to 24:00	-
4	500	01.09.2021 to 30.09.2021	00:00 to 24:00	3.8 - 4.49
5	300	01.09.2021 to 30.09.2021	00:00 to 03:00	-
6	300	01.09.2021 to 30.09.2021	19:00 to 24:00	-
7	1000	01.10.2021 to 20.10.2021	00:00 to 24:00	3.8 - 4.49
8	500	01.10.2021 to 20.10.2021	00:00 to 03:00	-
9	500	01.10.2021 to 20.10.2021	19:00 to 24:00	-

Source

IEX Price Trend





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	129.97
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	71.80
Diesel	New York Harbor Ultra-Low Sulphur No 2 Diesel Spot Price	USD/Gallon	2.16
Heating Oil	New York Harbor Conventional Gasoline Regular Spot Price FOB	USD/Gallon	1.98
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	3.914
Jet Fuel	U.S. Gulf Coast Kerosene-Type Jet Fuel Spot Price FOB	USD/Gallon	1.91

(Source: ICMW METI Bloomberg Index Mundi)

Weather (Estimated for next fortnight)

City	Max Temp	Min Temp	Precipitation (Probability)
DELHI	33	27	41%
MUMBAI	30	26	62%
KOLKATA	33	27	56%
CHENNAI	37	25	38%

(Source - Accuweather)

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