12 July 2019, Volume XVI, Issue 5

Energy News Monitor

EXPECTATIONS OF REFORM IN POWER SECTOR

Monthly Power News Commentary: June - July 2019

India

The key challenges before the new government in the power sector include ensuring uninterrupted supply across the country and improving the financial health of the state-owned electricity discoms. The UDAY for revival of discoms has not met the targets — cumulative financial losses of discoms grew 44 percent to ₹216.58 bn at the end of FY19, reversing the declining trend since the scheme was launched in November 2015. Financially-weak discoms trigger a domino effect in the sector, as they are unable to pay power producers on time, who in turn fail to service their debt. The government had failed to achieve the initial target of ensuring "24×7 affordable and quality power for all by March 2019", with many major states providing only 17-18 hours of electricity a day to rural consumers. All 36 states/UTs had signed the 'Power for All' agreement with the Centre between 2014 and 2017. Once again, the blame was on weak finances of the discoms, which could not build adequate infrastructure to supply round-the-clock electricity. The addition of 25 mn new household connections through the Saubhagya scheme also seemed to have exacerbated the situation.

The Union power ministry has proposed a "power sector council" to address issues between the Union and state governments as part of the ministry's 100-day action plan. With power being on the concurrent list of the Constitution, many sectoral issues get stuck due to differences between the Union and the state governments. The council will help the Union and the state governments work on a common agenda and ensure round-the-clock power to all, a government official, who is part of the exercise. Other proposals by the power ministry include separation of the wire and electricity supply business, setting up of a pan-India power distributor and building renewable energy management centres across India. With electricity being on the concurrent list, it is for states to ensure reliable and affordable electricity to consumers. To be sure, the decision-making of the so-called power sector council would preclude legislative and regulatory domains of the centre and states. The ministry's 100-day plan also includes setting up a national electricity distribution company, proposed as an equal joint venture (JV) between NTPC Ltd and Power Grid Corp of India Ltd. The proposed firm may enter into JVs with the state discoms and help bridge market and credit risks at a time when state-owned discoms are struggling with their finances on account of losses and borrowings. Interestingly, of India's installed capacity of 349 GW, the peak demand is only 177 GW. Peak electricity demand has been low due to precarious finances of some discoms, which prevents them from procuring the required power. Discoms will no longer be able to get away without paying for the power they procure for supplying to consumers. The power ministry is ushering in a payment security mechanism on the principles of the pre-paid system to ensure prompt payment to gencos. This is part of structural changes being implemented to address

issues facing the sector and attract investments needed for improving quality of life with reliable and sustainable electricity supply. A mounting pile of gencos' unpaid bills has caused financial stress to many power projects, forcing some even to the brink of bankruptcy. The ministry's PRAAPTI portal pegs generators' total outstanding amount at ₹358.45 bn at the end of April. Under the new mechanism, discoms will have to furnish LCs to 'load despatch centres' before power from generation companies is allowed to flow to states. The despatch centres will limit the flow of power to the quantum covered by the LCs provided. Load despatch centres are nodal control points – akin to large railway junctions – that function at the national, regional and state levels to facilitate smooth and safe flow of power within and across states. The ministry is expected to issue an order for the new mechanism within a week. The order is building upon the provision of LCs that exist in power purchase agreements but are followed erratically or not at all. The ministry order will empower the despatch centres to follow the PPA provision and cut supply.

India is considering a plan to install smart meters in every home and business as part of its ongoing effort to turn around the country's ailing power sector. The plan under consideration would require 300 mn smart meters over three years. The federal power ministry has begun discussions with manufacturers on supplying the meters, which improve efficiency by monitoring and transmitting power use data. As part of the plan, the federal government is mulling providing subsidies to partially cover the costs. Preliminary estimates by the government put the cost for the meters at about ₹2,000 ($29) a piece, or $8.7 bn in total. That's partly based on an expectation that prices would be lower than a smaller government tender for 5 mn smart meters in 2017 at ₹2,503. Widespread use of smart meters could be a gamechanger for ailing Indian distribution utilities. These distributors lose nearly one-fifth of their revenue through various technical and commercial reasons including power theft or inefficient billing and collecting, according to the power ministry. Poor financial health prevents utilities from supplying uninterrupted power countrywide, which is needed to fulfill the power-for-all goal.

Energy sector technocrats representing some 1.5 mn public sector powermen have opposed NITI Aayog's proposals, in its strategy paper, to privatise power distribution in urban areas and run a franchisee system in rural. AIPEF has said any move to privatise power distribution would meet resistance by power engineers and employees at all levels. The NITI Aayog strategy paper had basically highlighted such points, which were part of Electricity (Amendment) Bills 2014 and 2018. In its paper, NITI Aayog has proposed privatisation of state discoms and the use of a franchisee model to reduce AT&C losses in the domestic power sector. The federal policy think tank has also recommended discoms may adopt a franchisee model for its retail business in rural areas and stipulate a minimum level of performance parameters, including the use of decentralised generation sources and storage systems for local reliability and resilience. AIPEF has opined that 'experiments' of privatisation and franchisee models had failed across the country and under such circumstances, the Centre should discuss related issues with the power sector engineers so that a fruitful power policy could be framed. This would ensure quality and affordable power to consumers.

Power companies have welcomed a fresh notification issued by the RBI on stressed assets, calling it a workable framework. The Association of Power Producers was one of the parties that have fought a legal battle for 14 months with the RBI over a 12 February 2018 circular, which had put very stringent guidelines for banks to treat stressed assets, including compulsory referral to the bankruptcy court on defaults. The new circular has relaxed compulsory referral to the bankruptcy court. It has restored the discretion to bank boards over the resolution path. Loan accounts that defaulted for 30 days will be moved to resolution, against one-day default mandated in the previous circular.

The power ministry proposes to conduct reverse e-auction to select gasfired stations that will be offered subsidised imported fuel under a bailout package for 24,000 MW stressed projects. The ministry will soon approach the Union Cabinet to seek approval for the scheme recommended by a high-level empowered committee on stressed assets. The proposal, for three

years starting this fiscal, is an extension of the previous rounds of subsidised gas auction schemes to power plants. The operating power plants will have to increase their supply to existing buyers. Giving power plants an option to sell power on power bourses is also being explored. Power companies have been urging the government to restart the scheme as about 8,000 MW capacity is completely stranded while the rest is stressed. Data available with the Central Electricity Authority showed the gas-based power stations in the country operated at a capacity of 24 percent in May.

Average spot power price fell by 29 percent to ₹3.34 per kWh in May compared to the year-ago month, the IEX said. With trading of 3,772 mn kWh of electricity, the volume in the DAM fell 6 percent on month-on-month basis, while the fall was 23 percent on year-on-year basis. On a daily average basis, around 122 mn kWh were traded in May 2019, the IEX said. According to the NLDC data, the all India peak demand met reached a new high of 183 GW in May 2019, an increase of 7 percent over 171 GW peak demand met in May 2018. On an all India basis, the energy met was 118 bn kWh in May 2019. It is a rise of 4 percent compared to 113 bn kWh last year. The electricity market at IEX the DAM and TAM combined traded 4,090 mn kWh saw 21 percent decline over 5,169 mn kWh traded in May 2018. Almost 23 percent of the demand for power remained unmet between 8 pm and 12 midnight at the IEX since discoms were not inclined to buy at higher than average price during this period. Prices were high but suppliers could only sell 80 percent of power demand sourced through exchanges. While discoms wanted to buy a total of 43 million kWh of power during the period, generators offered to sell only 34 mn kWh at the price band required by discoms. Trade was settled for 32.84 mn kWh only. The power was traded at prices ranging between ₹4.26 per kWh and ₹5 per kWh. During the rest of the day, supply offers were more than demand and average power price for the day was ₹3.02 per kWh. During the day a total of 229.42 mn kWh of power was offered for sale while demand was 161.43 mn kWh only. Trade for 138.77 mn kWh were settled. Demand for power was lowest for the morning slot 7 am to 8 am when trade for power was settled at ₹1.01 per kWh and demand was around 4.09 mn kWh while on offer was about 9.7 mn kWh. Demand for power was highest for the slot 10 pm and 11 pm when demand for power was 11.8 mn kWh while on offer for sale was 8.72 mn kWh. Trade was settled for 8.42 mn kWh at ₹5 per kWh – highest during the day. For the slot 9 pm and 10 pm, generators offered to sell 10.78 mn kWh while demand was 8.6 mn kWh. Trade was settled for 8.3 mn kWh at ₹4.93 per kWh – the second highest during the day.

India will add 131.31 GW of power generation capacity during 2019 to 2022, Parliament was informed. India's total installed power generation capacity was 356,817.6 MW as on 31 May 2019. In 2018-19, all India electrical energy requirement was 1274.59 bn kWh and energy supplied was 1267.52 bn kWh. The all India peak demand was 177.022 GW and peak demand met was 175.528 GW for 2018-19 (shortage of 0.6 percent). As per 'National Electricity Plan - Generation' issued in January 2018, the projected peak demand is 226 GW and energy requirement is estimated at 1,566 bn kWh at the end of 2021-22. The Plan projected peak demand at 299 GW and energy requirement at 2,047 bn kWh at the end of 2026-27.

Vedanta Resources and JSW Energy have placed very low bids of about ₹10 mn per MW for an incomplete stressed power project in Odisha, leaving lenders worried over big haircuts for about 15 GW of such non-commissioned assets. Industry insiders said the bids are exceptionally low considering the fact that the project has coal and power purchase tie-ups. The bids cover just the land cost and are very close to liquidation cost. Vedanta Resources has offered upfront payment of ₹6.6 bn for the 660 MW project of Ind Bharat Group, or ₹10 per MW, in the National Company Law Tribunal in a recent bidding round. JSW Energy, too, has placed an upfront bid of ₹6.6 bn but has made a conditional offer of another ₹2.2 bn over a period of time.

Delhi's electricity demand touched an all-time high of 7,241 MW. This year's stats broke the previous record of 7016 MW recorded on 10 July 2018, and according to electricity discoms the electricity consumption is

expected to go up to 7400 MW in the ongoing summer season. BSES Rajdhani Power Ltd and BSES Yamuna Power Ltd, however, were able to successfully meet the all-time high peak power demand. Along with them, Tata Power Delhi Distribution Ltd was also able to meet the demand of 2,014 MW in its areas of supply. Delhi's peak power demand first crossed the 6000 MW barrier in 2016 (6216 MW on 1 July) while in this year, the demand crossed the mark on 24 days. Delhi's peak power demand is more than thrice of that of Kolkata and is also more than the power demand of both Mumbai and Chennai put together. Running of air conditioners, coolers and fans is the main reason behind the increase in power demand in the national capital, according to experts. BSES and other companies have invested heavily over the years to build the necessary infrastructure for providing electricity to consumers around the city with minimal losses of power. A study by the CSE said the average power consumption in the national capital during peak heatwave days in June increased by 25 percent compared with the season's average. Environment experts suggested that buildings must be designed for thermal comfort to minimise the use of mechanical cooling systems. The CSE has also noted that there was an increase of 1 percent in the peak energy demand per degree rise in temperature between 2018 and 2019 summers. The DERC has decided to revise power tariffs by the end of July. According to the Delhi government, this year's revision will bring relief to households whose power bills had increased due to last year's hike in fixed charges. After inviting suggestions and objections on petitions filed by distribution companies from stakeholders, the DERC has decided to hold a public hearing next month. Electricity charges have not been hiked in the capital in the last three years. In last year's revision, the power regulator had increased the fixed charges for every consumer, while decreasing the energy costs. Fixed charge, a part of the electricity bill, is the cost a consumer has to pay even if she does not consume any power. In last year's revision, the fixed charges were increased across all slabs — for 2-5 (kW, from ₹35 to ₹140; for 5-15 kW, from ₹45 to ₹175; for 15-25 kW, from ₹60 to ₹200; and for more than 25 kW, from ₹100 to ₹250.

The sultry weather conditions prevailing across the region has pushed the power demand in Punjab and Haryana to new peaks. Punjab power demand exceeded 12,700 MW, breaking last year's record demand of 12,542 MW achieved on 9 July. In Haryana, the maximum power demand of the season touched 10,127 MW, surpassing last year record of 10,126 MW of 28 June. In Punjab all four units of Ropar thermal and three units of Lehra Mohabbat are generating power. Punjab generated 6,290 MW and drew 6,352 MW from central sector units and other sources, according to power purchase agreements.

With the start of paddy transplantation, demand for electricity in Punjab shot up to 11141 MW, an increase of more than 1900 MW from 9234 MW. Punjab overdrew 224 MW from the grid at the time of peak demand. PSPCL reiterated that it would maintain eight-hour supply to tube wells. Last year on the first day of the paddy sowing season, electricity demand in Punjab shot up by 1363 MW and touched 10184 MW over the previous day's demand of 8621 MW. The eve of the paddy season, electricity supply in Punjab was 185.5 million units with thermal plants supplying 55.6 mn units. Private sector Rajpura thermal plant supplied 23.3 mn kWh and Talwandi Sabo 24.4 mn kWh. The maximum demand this year is expected to touch 14000 MW and PSPCL is likely to meet the challenge. Last year, maximum demand during the paddy season was 12638 MW. The power demand in Punjab has jumped by another 10 percent this year PSPCL supplying 263 million kWh of electricity to all the power consumers within Punjab. Last year, the PSPCL had supplied 11,994 MW which is about 1,000 MW higher as compared to 10,988 MW last year on the same day. PSPCL was providing 8-hour power supply to its agriculture consumers from 13 June, along with 24-hour power supply to all other categories of consumers. PSPCL has arranged for a buffer of six transformers of various capacities at all divisions in Punjab for replacement against damage so as to reduce the time for replacement and restoration of supply. The ever-increasing power subsidy bill seems to have turn into a quagmire for the Punjab government, which ended up paying an interest of ₹5.93 bn only on delayed payment of subsidies to the PSPCL during the

last fiscal. The power subsidies in Punjab are increasing by 9 percent every year and the government has been unable to clear the entire subsidy bills for the last five years. The defaulting amount to be paid by the government to the PSPCL is increasing and is pushing the power corporation to go for short-term loans to meet the day-to-day expenses since timely release of subsidy payment is closely linked to the financial position of the utility. Punjab is among the few states in India that are providing power subsidies to almost all categories of consumers barring a few domestic and non-residential connections. Despite, electricity regulator asking the PSPCL to impose a full tariff in case the government fails to release the subsidy amount in advance monthly instalments, the government has been delaying the release of subsidies amounts for the last five years. During the financial year 2019-20, Punjab government had paid ₹4.19 bn and the provisional amount of electricity duty while infrastructure development fund amounting to ₹5 bn for the period up to May end has been adjusted by the PSPCL against the due amount of ₹22.86 bn, leaving a gap of ₹13.61 bn. The taxes that are collected along with the power bills by the state government could be ploughed back into the system for the development of electricity infrastructure, but there is no transparency as to what the government does with the amount collected.

Keeping the assembly elections in mind, the Maharshtra government has asked energy and finance department to prepare a proposal for providing free electricity to farmers. If implemented, the Maharashtra government may have to foot a bill of ₹30 bn per annum over and above the subsidy it is already paying. The state power distribution utility Mahavitaran's average cost of supplying power is around ₹6 per kWh but the agriculture sector gets it at ₹1.50 per kWh and the state pays ₹50 bn per annum to the distribution utility to keep the rates artificially low. Though the annual power bill of the agriculture sector is about ₹30 bn, only around ₹5 bn is recovered. Ahead of the 2004 assembly elections, the then Congress-NCP government announced free electricity for farmers but ended the scheme within three months of coming back to power.

The Telangana government has sought 2000 MW additional power from NTPC to meet the growing power demand in the state, in view of the upcoming Kaleshwaram lift irrigation project. Telangana has total 16,300 MW installed capacity of conventional and non-conventional power. The present demand of power stood at 7800 MW to 8000 MW as it was lean season for agriculture.

As power crisis worsened in the sweltering summer, the authorities launched a crackdown on people having unauthorised electricity connections in Jammu. During a drive, power department officials booked 825 defaulters and disconnected 450 illegal connections. People in Jammu reeled under blistering heatwave as the mercury soared to 43.1 degrees Celsius, resulting in massive power crises in Jammu west. A total penal amount of ₹2.55 million was imposed on the defaulters during the drive.

Power consumers in UP could face a 25 percent hike in tariff. Against the prevailing power tariff of ₹4.90 per kWh for the first 150 units, the new tariff will be ₹6.20 per kWh in the same slab. The power tariff for the commercial sector will also be hiked by 10 to 15 percent. This 26 percent hike in tariff for domestic sector has been strongly opposed by political parties that are not in power. The UPPCL has already submitted the proposed new power tariff structure for 2019-20 to the UPERC for vetting and final approval. The UPERC will now conduct public hearing and issue a public notice before taking a call on the new tariff order for the current financial year. The yawning revenue-expenditure gap and the projected loss by the state power utility is projected as gross inefficiency of the UPPCL management, apart from the procurement of expensive power. The state energy department has sought to justify the proposed increase in power tariff for the current year over steeper prices of fuel, including coal, and consequently higher cost of power generation. The Noida RWA federation wrote to UP government regarding 20 percent proposed power tariff hike and termed it as an 'unjustified' move. Federation of Noida Residents Welfare Association

submitted various points against the proposed hike in their letter which includes reduction in line losses, reduction in average purchase costs, abolition of fixed charges and justification for separate, special tariff for Noida being a profit centre. Noida is well controlled so tariff should be further reduced if distribution system is upgraded. Further, the RWA federation maintained that there should be reduction in average purchase costs. On fixed charges, the RWA federation maintained that while UPPCL has been levying fixed charges in addition to the electricity charges on the basis of the actual consumption of electricity, the total sanctioned load of UP is far more than the available power supply. Annoyed by the proposal of UPERC to hike power tariff by 25 percent, farmers throughout the state staged protests at sub-division offices under the banner of BKU. In Agra, farmers associated with BKU and other organizations, met at Fatehabad and Sadar tehsils. They handed over a memorandum to sub-divisional magistrates, demanding free power supply for running private tubewells used for irrigation.

Providing major relief to the residents of Chandigarh, the JERC approved the electricity department's petition, wherein they had not proposed any hike in power tariff for financial year 2019-20. As per the latest orders of the JERC, the new tariff will be applicable from 1 June and will remain valid till further orders from the commission. Last time, the JERC had marginally increased rates in domestic and commercial categories and had reduced rates in the industrial category for the financial year 2018-19. In the domestic category, rate were increased from ₹2.55 to ₹2.75 per kWh in the slab of 0-150 kWh, while there was no change in the rate of ₹4.80 per kWh in the slab of 151-400 unit. In the slab of above 400 kWh, the rate was increased from ₹5 to ₹5.20 per kWh. Along the similar lines, a small increase in the commercial consumer category was also made. In the commercial category, there was no change in the rate of ₹5 per kWh in the slab between 0-150 kWh, while in slab of 151-400, rate was increased from ₹5.20 to ₹5.30 per kWh. In above 400 slab, rate was increased from ₹5.45 to ₹5.60 per kWh.

In power surplus Rajasthan, the rates should normally be cheaper. But ironically, they are one of the highest in the country. Notwithstanding the already high rates, the discoms raised fuel surcharge by a steep 56 paisa, not seen in last so many years. A comparison of commercial electricity rates in six states reveals that power tariffs in Rajasthan have shot up to ₹7.93 per kWh without the surcharge, more than what the industry pays even in Maharashtra, an industrially advanced state. In its bid to attract investment and provide policy stability, Punjab has capped the power tariffs at ₹5 per kWh for next five years. States like Telangana, Andhra Pradesh and Madhya Pradesh extend tariff subsidies up to ₹2 per kWh to the industry. Moreover, Rajasthan has ample scope to bring down its power cost as it has lot of potential for cheaper solar and wind energy.

In Himachal Pradesh, domestic consumers, except below poverty line consumers, will have to pay additional 5 paise power tariff from 1 July as the Himachal Pradesh Electricity Regulatory Commission has revised the power tariff. The fixed charges for all consumers not covered under demand based fixed charges have been increased by ₹10 per month to cover the fixed costs of the HPSEBL. For new Industrial category of consumers coming into production after 1 July this year, commission has approved energy charges at 15 percent lower than the notified tariff for the respective categories for a period of three years beginning 1 July this year. The commission has approved the proposal of the HPSEBL to allow a rebate of 15 percent discount on energy charges for additional power consumption beyond the level of FY 2018-19 for existing industrial units.

After Tamil Nadu battling the water crisis, the neighbouring Kerala may plunge into darkness if it doesn't rain in ten days. As the water level in major reservoirs is inching closer to dead storage, the KSEB is facing an unprecedented electricity crisis. Idukki reservoir which is a major reservoir for Kerala's electricity generation is seeing water level plummeting to 2,305 feet,

which is 44 feet below the level recorded on the same day last year. The average consumption of power in the state is around 75 mn kWh per day and with more air-conditioned installed due to harsher and prolonged summer season, the power consumption peaks to 82 mn kWh a day. If the weather continues to be harsher, the consumption of electricity will increase the timing of the load shedding. The 147 km long Edamon-Kochi 400 kV power transmission line has been delayed which has affected the KSEB's efforts to enhance power availability. The delay in commissioning the 147-km-long Edamon-Kochi 400 kV power transmission line is posing hurdles to the KSEB's efforts to enhance power availability in the state. The KSEB has decided to regulate and impose restrictions on power generation in the wake of the dip in water level in reservoirs. Till the reservoirs have water to generate 390 mn kWh, a decision has been made to regulate the daily consumption from hydel sources to 12 mn kWh. The decision was made following a joint review meeting of the board of directors and heads of generation, transmission, system operation and planning wings. The total storage in dams in the State as per the estimates last was adequate only to generate 476 mn kWh. This was similar to the water level in 2017, when the State had to suffice with a weak monsoon. The board could cart only 63 mn kWh from other sources through its transmission infrastructure and there was no reason for any concern at present. But going by the current intensity of the monsoon, to touch the generation level of 390 mn kWh, it may take 18 to 20 days.

The Rajasthan government reversed the previous government's dispensation's decision to disinvest the Kali Sindh and Chhabra power plants. The decision to not divest was taken because of the improvement in operational efficiency and financial condition of the Chhabra and Kalisindh thermal power plants. The previous government had decided to disinvest the Chhabra and Kalisindh plants, located in Baran and Jhalawar districts respectively, in order to reduce the losses of power companies.

The CERC has allowed state-owned transmission utility Power Grid to offer towers to telecom companies for BTS installation to improve mobile connectivity, especially in remote rural areas. The move will not only address the issue of deficiency of telecom coverage in the country, particularly remote areas, but this segment could also be money spinner for Power Grid. Besides, the power distribution utilities will get a share of income, which would eventually reduce tariff burden on consumers. Power Grid had sought the CERC's permission to utilise existing electricity transmission infrastructure for telecommunication purposes. Besides, Power Grid had pleaded that this would also help in providing reliable power supply for operation of BTS equipment from transmission line itself by adopting suitable technologies. The availability of power supply is more than 99.5 percent at Power Grid towers.

As many as 52 electricity transmission towers collapsed between October 2016 and March 2018, according to the latest report by the Central Electricity Authority, which also points out rampant irregularities on the part of transmission companies leading to collapsing of the assets. Of the 52 dysfunctional towers, 41 failed within five years of commissioning. Most of the failed towers belonged to state-owned PGCIL, followed by Sterlite Power, L&T, Adani Transmission and Essel Infra. PGCIL, which owns more than 37 percent of the transmission lines in the country and ferries about 50 percent of the total electricity generated, recorded 38 tower failures in the aforementioned period. Sterlite and L&T lost five towers each while one tower belonging to Adani and Essel, respectively, failed.

Rest of the World

Japan has agreed to lend Bangladesh $1.31 bn under the 40th official development assistance loan package for the construction of the Matarbari ultra-supercritical coal-fired power plant. The objective of installing the 1,200 MW plant at Maheshkhali upazila in Cox's Bazar is to meet the growing electricity demand and ensure stable power supply, the Economic Relations Division said. The

construction of a $2.5 bn power plant in Bangladesh, a joint venture with China, will be delayed after critical equipment was stolen or destroyed during clashes between workers at the site. A Chinese worker was killed and at least six injured when violence erupted between Bangladeshi and Chinese construction workers at the plant, with the former angered by the death of a colleague in a fall. As a result of the damage the coal-based 1,320 MW power plant would not come on line early next year as planned. Construction of the coal-fired plant employs about 8,000 workers, of whom 2,700 are Chinese. The full cost of the destruction and delays has yet to be ascertained. All the Chinese workers are living in the dormitories inside the plant premises.

The first ever electricity import from Slovakia and Hungary to Ukraine was implemented by ERU Trading, a subsidiary of US-based ERU Corp, according to the company. The import was done through the so-called Burshtyn Energy Island, the power plant with several substations in the west of Ukraine. Energy export from Europe was implemented thanks to the European trading partners and the European Commission. Company representatives believe that electricity import through BEI is the next step in Ukraine's integration into the European energy markets and the guarantee of fair prices for the Ukrainian consumer. The expansion of ENTSO-E, by connecting the Ukrainian power system, will ensure the integration of Ukraine's electricity market into the internal EU energy market, experts said. ENTSO-E currently represents 43 electricity transmission system operators from 36 countries across Europe.

Thailand has announced it will develop its power transmission lines to become the electricity hub of the region, sourcing hydropower from Laos and selling it to Malaysia, Cambodia and Myanmar. The energy ministry said that the idea was part of the ASEAN energy plans that ASEAN energy ministers would discuss in their meeting on 2-3 September to guarantee cheap electricity for ASEAN people. Modern transmission lines would serve the idea, the ministry said.

Poland's government proposed draft regulations that would allow big electricity consumers to receive compensation for surging power bills. Wholesale power prices in Poland, which generates most of its energy from coal, jumped in the autumn last year following the rising costs of carbon emissions and coal prices. To prevent a surge in prices for households and bigger consumers ahead of elections in the European Union and at home, the ruling Law and Justice (PiS) party passed legislation in December aimed at freezing power prices at mid-2018 levels for all Poles. While the cap worked for households, which represent a regulated segment of the market, it was not effective for companies and local authorities that normally buy electricity based on market prices. The cap for big clients did not work because the energy ministry did not issue supplementary regulations to clarify technical issues related to the prices at which companies buy electricity. As a result the Polish parliament removed the power price cap for big consumers and the government proposed legislation on future compensation.

Power returned to much of Argentina and two neighbouring countries following a massive blackout that left tens of millions in the dark, but the cause of the "unprecedented" outage was still unclear. Argentina's grid "collapsed" around 7 a.m., leaving the entire country without power. The outage cut electricity to much of neighbouring Uruguay and swaths of Paraguay, and shut down YPF SA's La Plata refinery, Argentina's largest. Power had returned to nearly 90 percent of Argentina by early and to virtually all of Uruguay and Paraguay. The blackout comes amid a deepening economic crisis in Argentina that has plunged nearly a third of the country into poverty, pushed interest rates skyward and sent the peso tumbling against the dollar, prompting mass protests throughout the country. The blackout also renewed questions about the vulnerability of parts of the South American grid, which transcends borders and connects many of the region´s largest economies.

Utility PG&E Corp planned to proactively shut off power to 27,000 customers in Northern California due to an increased risk of wildfires. The shut down will cover the Sierra Foothills, an area spanning parts of Butte, Yuba, Nevada, El Dorado and Placer counties northeast of San Francisco and near the border with Nevada, the utility said. PG&E said this year it would significantly expand the practice of shutting off power to communities at risk of wildfire when conditions demand it, despite objections from some consumer advocates who said such disruptions can harm vulnerable people such as those who need electricity for medical equipment. State investigators concluded that PG&E's power lines caused the fire, which leveled nearly 19,000 homes and other structures and caused some $16.5 bn in losses.

A plan by South Africa's Bonang Power and Energy to develop a 360 MW power plant on Uganda's River Nile has met resistance from critics who say the project will destroy the popular tourist attraction of Murchison Falls. Uganda's ERA published a notice indicating Bonang had applied for a permit for a feasibility study on a 360 MW power project on Murchison Falls. Earlier this year a 183 MW dam on the same river, built with a Chinese loan was commissioned. Another with 600 MW capacity, also China-financed, is due for commissioning later this year.

FY: Financial Year, discoms: distribution companies, UDAY: Ujwal Discom Assurance Yojana, UT: Union Territory, gencos: generation companies, mn: million, bn: billion, LCs: letters of credit, PPA: power purchase agreement, AIPEF: All India Power Engineers Federation, AT&C: Aggregate Technical and Commercial, RBI: Reserve Bank of India, MW: megawatt, kWh: kilowatt hour, IEX: Indian Energy Exchange, DAM : day ahead market, TAM: term ahead market, GW: gigawatt, NLDC: National Load Dispatch Centre, CSE: Centre for Science and Environment, DERC: Delhi Electricity Regulatory Commission, kW: kilowatt, PSPCL: Punjab State Power Corp Ltd, UP: Uttar Pradesh, UPPCL: Uttar Pradesh Power Corp Ltd, UPERC: UP Electricity Regulatory Commission, BKU: Bharatiya Kisan Union, JERC: Joint Electricity Regulatory Commission, HPSEBL: Himachal Pradesh State Electricity Board Ltd, , KSEB: Kerala State Electricity Board, km: kilometre, kV: kilovolt, CERC: Central Electricity Regulatory Commission, BTS: base trans-receiver station, PGCIL: Power Grid Corp of India Ltd, US: United States, ENTSO-E: European Network of Transmission System Operators for Electricity, EU: European Union, ASEAN: Association of Southeast Asian Nations, ERA: Electricity Regulatory Authority

NATIONAL: OIL

Road ministry considers levying commission on petrol, diesel sold on expressways

9 July. The Road Transport and Highways Ministry is considering a plan to raise money from fuel stations located along the expressways by levying a commission on every litre of petrol or diesel sold. The move comes after the road sector lost its exclusive rights to use the erstwhile road cess at a time when it faces the daunting task of building roads under the Bharatmala project, the cost of which run into several crores.

Source: ***The Hindu Business Line***

Budget 2019: Petrol, diesel get dearer by ₹2 a litre on excise duty hike

6 July. Fuel prices were revised across the country, a day after the announcement of additional excise duty and cess of ₹1 per litre on petrol and diesel. In Delhi, petrol is being sold ₹2.45 higher at ₹72.96 per litre and diesel at ₹66.69 per litre after a ₹2.36 hike. In Mumbai, petrol is being sold at ₹78.57 while in Kolkata it is retailing at ₹75.15, higher by over ₹2 per litre. Finance Minister Nirmala Sitharaman had announced a hike in cess on auto fuel prices while presenting the Union Budget 2019-20 in Lok Sabha. Sitharaman, who presented the first budget of the new government, had said crude prices have softened from their highs, paving way for her to review excise duty and cess on petrol and diesel.

Source: ***Business Standard***

India's MRPL buys its 1st US Thunder Horse oil with 1 mn barrel order

5 July. India's Mangalore Refinery and Petrochemicals Ltd (MRPL) has made its first purchase of US (United States)-produced Thunder Horse crude oil via a tender for mid-October delivery, its managing director M Venkatesh said. The refiner placed an order to buy 1 mn barrels of the sour oil, Venkatesh said. The deal comes as Indian refiners ramp up purchases of US oil to compensate for the loss of Iranian oil supplies as Washington tightens sanctions on Tehran. The widening spread between Brent and West Texas Crude prices is also providing a boost to Asian refiners looking to buy US oil. MRPL, which used to be Iran's second-biggest Indian oil client, operates a 300,000 barrels per day coastal refinery in the southern Karnataka state. Venkatesh told Reuters the Thunder Horse deal is the firm's second purchase of US oil following a shipment of high-sulfur Southern Green Canyon oil received in February 2018. Meanwhile MRPL's Venkatesh said all units are now operating normally at the Karnataka refinery, where crude processing was curtailed due to water shortages in early May.

Source: ***Reuters***

Railways owes over ₹10 bn in diesel bills: Goyal

3 July. The national transporter owes oil companies more than ₹10 bn in diesel bills, Railway Minister Piyush Goyal said. He said the payment of fuel bills was a continuous process, and the bills keep coming "periodically" and were also cleared in the same manner. He said bills amounting to ₹13.84 bn were being processed for payment currently. It owes Indian Oil Corp (IOC) ₹10.37 bn, Bharat Petroleum Corp Ltd (BPCL) ₹1.54 bn, Hindustan Petroleum Corp Ltd (HPCL) ₹615.3 mn, Reliance Industries Ltd ₹1.15 bn and Nayara Energy ₹159.6 mn. He said it was difficult to work out the impact of the increase in diesel prices on the railways as the cost of the fuel had risen and decreased multiple times. He said the railways had earmarked ₹221.79 bn for diesel traction in budget estimate 2019-2020.

Source: ***Business Standard***

Government neither divesting nor privatising ONGC: Pradhan

3 July. ONGC (Oil and Natural Gas Corp) will neither be disinvested nor privatised but only oilfields discovered by it are being monetised through a transparent bidding

process to ensure the country's energy security, Oil Minister Dharmendra Pradhan said. He said that synergy between ONGC and HPCL (Hindustan Petroleum Corp Ltd) is fully a corporate decision. In a transparent bidding process, the government is keeping some of the discovered oilfields of ONGC on a public domain based on a criteria which will produce more and pay higher to the government, he said. At a time when India is importing 80 percent of its crude oil requirement, there is a need to monetise natural resources, he said. He said the government is not privatising the ONGC but adopting a new model wherein both public and private players can participate in oil production.

Source: ***Business Standard***

Oil India wants to exit Russian project: Pradhan

3 July. Oil India Ltd has started the process to sell its 50 percent stake in Project License-61 in Russia as the performance of the asset didn't meet expectations, Oil Minister Dharmendra Pradhan said. He said the company has not yet decided to exit from its shale assets in the United States.

Source: ***Reuters***

Indian Oil to expand Asanur facilities, boost LPG capacities

3 July. Indian Oil Corp (IOC) is expanding its fuel storage capacity in Asanur on Chennai-Trichy highway, to meet the rising demand. Southern markets of Tamil Nadu are being fed from terminals at Sankari, Trichy, Madurai and Coimbatore. While Coimbatore is connected with the Bharat Petroleum's Cochin-Coimbatore-Karur Pipeline, other 3 terminals are fed by IOC's Chennai-Trichy-Madurai Pipeline, which has a booster station at Asanur with a line branching off to Sankari Terminal. The state owned fuel retailer is also augmenting the storage capacity of its bottling plants across the state to gear up for the rising demand LPG (liquefied petroleum gas). Around 6,000 tonnes of storage is being added across Ennore, Puducherry, Trichy, Madurai and Erode bottling plants. Adding all this, total value of all the ongoing and proposed projects in Tamil Nadu bottling plants is around ₹2.6 bn. Current LPG storage capacity across the bottling plants in the state is about 14,000 tonnes which includes 1,800 tonnes of Tirunelveli bottling plant which is yet to be commissioned. With this capacity IOC will be capable of rolling out about 2,65,000 cylinders per day adding up to an annual bottling capacity of 940 thousand tonnes per year. As India moves to BS VI grade auto fuels from Grade IV, IOC will take up the preparatory works to market BS VI grade automotive fuels at its retail outlets from January.

Source: ***The Economic Times***

NATIONAL: GAS

Three more CNG filling stations in Patna, Naubatpur by August

8 July. GAIL (India) Ltd will set up three more CNG (compressed natural gas) filling stations in Patna and Naubatpur by August this year to cater to the residents who wish to opt for cleaner, environment-friendly fuel to run their vehicles. The new CNG stations will come up at petrol pumps near Zero Mile (Bypass Road), Saguna Mor and Naubatpur. The CNG stations will be set up under the Pradhan Mantri Urja Ganga Yojana and will be connected to the eastern and north-eastern states with the national gas grid. The GAIL aims to set up 10 CNG stations in city by March 2020. Deputy general manager (project) of GAIL (Patna), Rajneesh Kumar Goel, said that of the three new CNG stations, two will be mother stations and one at Zero Mile will be daughter booster station. Mother stations are directly connected to the pipelines. CNG is made available in Patna through Haldia-Jagdishpur gas pipeline. CNG daughter station does not have the connectivity of natural gas pipeline. At these stations, CNG is transported through mobile cascades (bunch of cylinders) and then dispensed to vehicles through CNG dispensers. Rajneesh said the estimated cost of setting up one CNG station is around

₹25 mn to 30 mn. Currently, two CNG stations are functioning at Rukanpura (mother station) and Choti Pahari (daughter booster station). According to GAIL, the daily consumption of CNG at Rukanpura station is between 2,000 and 2,500 kilogram (kg) while it is 1,500 kg at Choti Pahari. The two stations had been launched in February this year. Rajneesh said around 1,500 CNG vehicles were running in the city and most of them were auto rickshaws. He said 1500 more auto rickshaws have been provided with the licence to run on CNG.

Source: ***The Times of India***

Pradhan invites Russian companies to invest in Indian gas infrastructure

4 July. India's Oil Minister Dharmendra Pradhan held a telephonic interaction with his Russian counterpart Alexander Novak where he invited Russian oil and gas companies to invest in building natural gas infrastructure in India and in the expansion of city gas distribution networks. Pradhan and Novak deliberated upon the way ahead to further strengthen India-Russia energy co-operation and in making hydrocarbon sector an important pillar of India-Russia Special and Privileged Strategic Partnership.

Source: ***The Economic Times***

GAIL commissions gas pipeline to Gorakhpur

3 July. GAIL (India) Ltd said the Pradhan Mantri Urja Ganga (PMUG), the gas pipeline from central India to east, has reached Gorakhpur in Uttar Pradesh. The company said a 165 kilometre (km) spur line to take the natural gas to Gorakhpur has been successfully commissioned. GAIL's infrastructure in Gorakhpur is in readiness to commence gas supplies to the upcoming fertiliser plant and the city gas project in the city. The revised project contour spans over 3,400 km to serve eastern and northeastern states. GAIL chairman B C Tripathi said the sequential commissioning of the PMUG project amid ground-level challenges is encouraging. In south, GAIL is scheduled to commission the 450 km Kochi-Koottanad-Mangaluru pipeline by September 2019, he said.

Source: ***Business Standard***

CNG price in Delhi hiked by 90 paise to ₹46.60, 7th increase in 15 months

3 July. CNG (compressed natural gas) price in Delhi and its suburbs was hiked by about ₹1 per kg (kilogram), the seventh increase in rates in 15 months. Indraprastha Gas Ltd, the sole supplier of CNG to automobiles in the national capital region, said the increase was warranted because of "recent changes in transmission tariffs of gas pipeline." CNG price in Delhi was raised by 90 paise per kg to ₹46.60. The increase in adjoining Noida, Greater Noida and Ghaziabad was ₹1 per kg to ₹52.95. CNG rates in Rewari, Gurugram and Karnal in Haryana have been raised by 95 paise. This is the 7th increase in CNG prices since April 2018. CNG price was last hiked in April by ₹1 per kg because of the rise in the price of domestic natural gas and fall in rupee value against the dollar. In all, rates have gone up by ₹6.89 per kg since April 2018. IGL, however, did not raise the price of piped natural gas it supplies to households in these cities for cooking purposes. Piped natural gas (PNG) currently costs ₹30.50 per standard cubic meter in Delhi and ₹30 in Noida, Ghaziabad and Greater Noida. Rates of CNG and PNG vary in different cities due to the incidence of local taxes. IGL said it will continue to offer a discount of ₹1.50 per kg in the selling prices of CNG for filling between 12.00 am to 6.00 am at select outlets in Delhi, Noida, Greater Noida, and Ghaziabad. The revision in retail prices of CNG has been effected after an increase in transmission tariff of gas pipeline and an increase in operating expenses since the last price revision. IGL sells CNG to over 10.5 lakh vehicles in the national capital region through a network of over 500 CNG stations. It also supplies PNG to over 11.20 lakh households in Delhi and NCR towns.

Source: ***Business Standard***

NATIONAL: COAL

An Indian billionaire doubles down on controversial coal mine

9 July. The Indian billionaire behind the controversial Carmichael coal mine in Australia is hitting back at criticism the endeavor will be both unprofitable and too dirty. Gautam Adani bought the resource in Australia's Galilee Basin in 2010 as Indian companies rushed for overseas energy supplies amid forecasts of booming demand. But as coal prices fizzled through the first half of the decade, Carmichael's output -- closer to lower-quality Indonesian coal than the high-value varieties Australia is known for -- is seen unable to fetch a price strong enough to be profitable. Adani said the board approved 10 mn metric tonnes of annual output from Carmichael's first phase, which will head to his power plants in India, including Mundra and Godda. Adani Group is headquartered in Gujarat the state where current Prime Minister Narendra Modi served as the Chief Minister for little over a decade before he swept national elections in 2014. India's challenges supplying reliable power to every home have been more about distribution than whether it has enough power plants or coal.

Source: ***Bloomberg***

MAHAGENCO's plan to get coal supply from Chhattisgarh stalled again

7 July. MAHAGENCO (Maharashtra State Power Generation Company)'s plans to get coal from its own mine in Chhattisgarh are just not taking off. The public hearing for environmental clearance of Gare Pelma-II block was scheduled to be held on 27 June, but it has been postponed following an order by Bilaspur high court. The generation company was allotted the coal block in 2015 and it appointed Adani Enterprises as the mine development operator. For one year, the company had been waiting to get the green nod for developing the block located in Mand Raigarh Coalfields in Chhattisgarh's Raigarh district. The first public hearing was scheduled for 17 April 2018, but was postponed due to various reasons. The next date was fixed on 27 June 2019. The affected persons are strongly opposing the mine and don't want to give up their land. The activist said that locals were opposing the proposed mine as 6 to 7 coal mines are already operating in the area.

Source: ***The Economic Times***

Budget 2019: Coal ministry sees 48 percent jump in budget allocation to ₹11.6 bn for 2019-20

6 July. The Budget allocation for the coal ministry has registered a jump of 48.2 percent to ₹11.59 bn in 2019-20 from ₹7.81 bn in 2018-19. The increase has been over the revised estimates of the 2018-19 budget, according to Budget documents. While the expenditure was at ₹7.70 bn for 2018-19, in case of 2017-18 (actual) it was ₹7.22 bn, it added. The bulk of increase in the Budget allocation for 2019-20 is towards central sector schemes. The expenditure budget of ₹11.59 bn in the 2019-20, includes ₹10.97 bn on central sector schemes/projects and ₹231.5 mn on Coal Mines Pension Scheme. The investment in public enterprises, including Coal India Ltd (CIL), has increased from ₹201.21 bn in budget 2019-20, over the revised estimate of ₹175.22 bn in 2018-19.

QUICK COMMENT
Increase in budget allocation for coal should close the demand supply gap!
Good!

Source: ***The Economic Times***

Supreme Court asks Meghalaya to deposit ₹1 bn fine for illegal coal mining

3 July. The Supreme Court directed the Meghalaya government to deposit the ₹1 bn fine imposed on it by the NGT (National Green Tribunal) for failing to curb

illegal coal mining with the Central Pollution Control Board (CPCB). A bench of justices Ashok Bhushan and K M Joseph directed the state administration to hand over the illegally extracted coal to Coal India Ltd (CIL) which will auction it and deposit the funds with the state government. The NGT had fined the Meghalaya government on 4 January. During the hearing, the state government had admitted that a large number of mines were operating illegally in the northeastern state. A total of 15 miners were trapped on 13 December last year in an illegal coal mine at Ksan in East Jaintia Hills district of Meghalaya, about 3.7 kilometre (km) deep inside a forest, when water from the nearby Lytein river gushed into it. The apex court had earlier refused to allow miners to transport extracted coal lying at various sites in Meghalaya.

Source: ***The Economic Times***

Assam MP seeks probe into illegal coal mining

3 July. Assam Congress MP (Member of Parliament) Pradyut Bordoloi demanded in Parliament that the Centre send an inter-ministerial fact-finding team to probe "largescale illegal coal mining" in Upper Assam. Bordoloi, who has been vocal against illegal coal mining in the state, raised the issue in the Lok Sabha during zero hour. He said that 100 persons have been arrested this year for their alleged involvement in coal syndicate and 55 for smuggling cattle to Bangladesh. He said 300 coal-laden trucks have been seized during the government's crackdown on coal syndicate and refuted any nexus between the state government and the coal mafia.

Source: ***The Telegraph***

NATIONAL: POWER

IndiGrid completes acquisition of 2 power transmission assets

9 July. IndiGrid, the first infrastructure investment trust (InvIT) in the power sector, announced that it has completed acquisition of two power transmission assets from Sterlite Power for an enterprise value of ₹50.25 bn. These two assets are NRSS XXIX Transmission and Odisha Generation Phase-II Transmission. IndiGrid had signed definitive documents to acquire the two assets in April 2019.

Source: ***The Financial Express***

June spot power price at IEX falls 11 percent to ₹3.32 per unit

9 July. Average spot power price fell 11 percent to ₹3.32 per unit in June compared to the year-ago month, the Indian Energy Exchange (IEX) said. With trading of 4,207 mn units of electricity, the volume in the day-ahead-market (DAM) grew 12 percent month-on-month. As compared to June 2018, the trading volume fell 15 percent. On daily average basis, around 140 mn units were traded in June 2019, the IEX said. According to the NLDC (National Load Dispatch Centre) data, the all-India peak demand met reached a new high of 183 GW in June 2019, an increase of 7 percent over 170 GW peak demand met in the year-ago month. On all-India basis, the energy met was 119 bn units in June 2019. It is a rise of 8 percent compared to 110 bn units last year. The electricity market at IEX - the day-ahead-market (DAM) and term-ahead-market (TAM)- saw combined trading of 4,566 mn units, a rise of 12 percent over 4,090 mn units traded in June 2018.

Source: ***The Economic Times***

Domestic consumers to bear brunt of revised power tariff in Kerala

9 July. Domestic consumers will bear the brunt of the hike in power charges in Kerala announced by the State Electricity Regulatory Commission (KSERC). The monthly bill would go up by 11.4 percent for domestic segment; 3.3 percent for commercial; 5.7 percent for low-tension ; and 6.1 percent for high-tension customers. The monthly bill will go up by about ₹ 18 for the lowest slab (0-50 units) and by ₹ 254 for the highest (500 units and above), KSERC chairman Preman Dhinraj said. BPL families with a connected load of up to 1,000 watts and

having a monthly consumption of up to 40 units have been spared the tariff revision. They will continue to pay ₹ 1.50 per unit. The stand-out feature of the new tariff was the increase in the monthly fixed charge for domestic customers ranging from ₹ 5 to ₹ 70, the first time it was announced. In comparison, only a modest hike, ranging from 25 paise to 40 paise per unit, was proposed in energy charges. The revised monthly fixed charges and energy charges have taken effect. The basic philosophy behind the fixed charge in two-part tariff is to recover a part of the permanent cost of the distribution licensees through fixed charge/demand charge, Dhinraj explained. The fixed cost to be levied from a domestic consumer having more connected load and high consumption need to be more than that from a consumer with less connected load and consumption. The KSERC therefore introduced fixed charges for the domestic category linked to monthly consumption, instead of connected load, similar to the slab-wise energy charges based on slab wise consumption. Fixed charges for domestic customers will rise between ₹ 5 and ₹ 50 for single-phase connections and between ₹ 10 and ₹ 50 for three-phase connections. The KSERC also noted that more than 80 percent of the consumers belong to domestic category, which in turn accounts for about 50 percent of the energy consumption. Nearly 90 percent of the domestic customers use only up to 250 units, and fall within the first five consumption slabs. For them, the energy charges will rise by 25-30 paise per unit.

Source: ***The Hindu Business Line***

Uttar Pradesh government posts 560 cops to check power theft

7 July. The state government ordered posting of 560 policemen in Uttar Pradesh Power Corp Ltd on a deputation period of two years with the aim of curbing high line losses that are denting its revenue. Following the order, 10 inspectors, 190 sub-inspectors and 360 constables would be posted at police check posts dedicated to take up power theft cases. Soon after coming to power, the Yogi government had decided to create a police check post in every district to handle power theft cases. The move was necessitated by incidents of power employees being attacked during anti-power theft drives. Energy Minister Shrikant Sharma had ordered snapping of power connections of consumers having electricity load of 5 kilowatt (kW) and above with unpaid electricity bills for two months. The decision to create dedicated police units to check power theft was initially taken in Akhilesh Yadav government but the move did not take off and was kept pending in the cabinet.

Source: ***The Economic Times***

Jharkhand CM sets July deadline to fix Ranchi power transmission glitches

6 July. Jharkhand Chief Minister (CM) Raghubar Das told officers of the state energy department that heads will roll if uninterrupted power supply is not ensured for Ranchi as well as for Jharkhand by September. Das reviewed the progress of electrification work underway across the state and other projects of the energy department at the state secretariat. Ranchi and the whole of Jharkhand have been reeling under long hours of power outage since May. Das directed officers to fix transmission and other problems in Ranchi by 31 July.

Source: ***The Economic Times***

Budget 2019: UDAY to be reviewed, new power tariff reforms on anvil

6 July. The National Democratic Alliance government's scheme for turning around the power distribution sector, Ujwal Discom Assurance Yojana (UDAY), will now be reviewed, Finance Minister Niramala Sitharaman said. In the past one year, the success rate of UDAY was being debated by several agencies. When UDAY was launched in 2015, the distribution companies cleared their debt

QUICK COMMENT
Review of UDAY is not likely to revive discoms!
Bad!

through bond issuance against them, but they are back at making losses now. The operational targets of reducing power supply loss and improving efficiency is still a work in progress. This is the first time in years that a finance minister has announced several reforms to reduce consumer electricity tariff and boost supply in the Budget speech. A package of power sector tariff and structural reforms would soon be announced, Sitharaman said. Surcharges and additional duties on electricity are levied by states for their industrial and commercial consumers to subsidise a section of their population. In 2017, the cross-subsidy charges were increased in the range of 60 percent and 300 percent across several states. Several power tariff reforms, such as reducing number of tariff slabs, introduction of direct benefit transfer of subsidy in place of subsidised electricity and new initiatives of content-carriage separation and time-of-the-day tariff, are also awaiting implementation.

Source: ***Business Standard***

Power ministry's directive on payment security mechanism could lead to load shedding, cautions ICRA

5 July. The centre's direction of putting in place a security mechanism before wheeling power to utilities would be a positive for power generation companies and is expected to improve payment pattern of utilities. However, it may be difficult for utilities to secure large quantum of letter of credits given their poor financials in many states and hence its implementation may be an issue, following this supply curtailment may follow leading to load shedding, ICRA in a recent note said. The power ministry has recently issued directions to the National Load Dispatch Centre (NLDC) and Regional Load Dispatch Centres (RLDC) to schedule and dispatch power from generation companies to distribution companies (discoms) only after implementation of payment security mechanism. This should be in the form of letter of credit by the discoms to the generation companies for the scheduled quantum of power, with effect from 1 August 2019.

QUICK COMMENT
Payment security imposed on discoms addresses the proximate and not the ultimate cause of power sector woes!
Ugly!

Source: ***The Economic Times***

Delhi CM offers help to Punjab government to develop model to provide cheap electricity

4 July. Delhi Chief Minister (CM) Arvind Kejriwal offered assistance to Punjab in developing a model to provide cheap electricity like that in Delhi. The CM said that electricity rates in Punjab are "very high". Earlier this month, he had claimed Delhi was getting 24-hour electricity supply at cheapest rates.

Source: ***Business Standard***

Supreme Court green light to end Adani-Gujarat PPA

3 July. The Supreme Court (SC) decided Adani Power Mundra was right in terminating the power purchase agreement (PPA) it had signed with Gujarat Urja Vikas Nigam Ltd (GUVNL), as it could not get coal supply on time from the Naini block of Gujarat Mineral Development Corp (GMDC). The apex court has also allowed Adani to seek a compensatory rate for the electricity it had alternatively supplied to Gujarat from its Korba power project in Chhattisgarh. The compensatory rate for Adani Power will have to be decided by the Central Electricity Regulatory Commission (CERC) within three months from the date the company approaches it. GUVNL will then have to make the payment to Adani within three months from the date the CERC decides. The case dates back to 2010, when Gujarat Electricity Regulatory Commission (GERC) decided Adani Power Mundra had illegally terminated the PPA the latter had signed with GUVNL.

Source: ***Business Standard***

NATIONAL: NON-FOSSIL FUELS/ CLIMATE CHANGE TRENDS

India added record 1.8 GW of rooftop solar power in last fiscal

9 July. Rooftop solar power in India grew at a robust pace with the country adding a record 1,836 MW in the last fiscal. At the end of FY19, the overall installed rooftop solar capacity stood at 4,375 MW, soaring 72 percent over FY18, a report by Bridge to India showed. The fresh capacity addition came from commercial, industrial, public sector and residential projects. With a nameplate capacity of 2,140 MW, the industrial segment is the biggest contributor to the solar rooftop power portfolio. Maharashtra (618 MW), Rajasthan (393 MW), Tamil Nadu (365 MW), Gujarat (314 MW) and Karnataka (298 MW) are the top five states leading in the pecking order of solar rooftop power generation. The solar rooftop market is split between inverter suppliers and engineering, procurement & construction (EPC) contractors, each with a size of 1,836 MW. Project developers make up the remaining 688 MW. Rooftop solar power continues to grow consistently and is gaining increasing share of the market. The government, in 2015, had set a huge renewable energy capacity target of 175 GW by 2022 for transitioning to a low-carbon pathway. Of this, 100 GW was earmarked for solar capacity, with 40 GW (or 40 percent) expected to be achieved through decentralised and rooftop-scale solar projects. US-based think-tank Institute for Energy Economics & Financial Analysis (IEEFA), in a previously released report, noted that from a historically low base, rooftop solar has been the fastest growing renewable energy sub-sector in India, with a compounded annual growth rate (CAGR) of 116 percent between 2012 and 2018. Some 70 percent of the market growth has been driven by commercial and industrial (C&I) consumers, clearly incentivised by the very high tariffs applying to these two sectors. (India has a very heavy cross-subsidy from C&I to residential and agricultural users, which in turn acts as a key incentive making self-generation for C&I immediately cost effective.) The remaining 30 percent is split equally between government and residential consumers. The increased adoption of rooftop solar in Indian states can be attributed to high retail tariffs for C&I consumers, favourable net metering policies, corporate social responsibility programmes and increased consumer awareness. IEEFA estimates that for the next three years, rooftop solar installations will grow at a CAGR of 50 percent, suggesting a cumulative 13 GW of installed capacity by FY2021-22.

Source: ***Business Standard***

Total & EDF Renewables to develop 700 MW solar projects in India

9 July. Total, one of the world's major integrated oil & gas (O&G) companies, along with French energy group EDF Renewables, will develop 700 MW of solar power projects in India through their joint subsidiary EDEN Renewables India. Total Eren and EDF Renewables announced signing of four 25-year long-term power purchase agreements, for four solar power projects totaling 716 megawatt peak (MWp) of installed capacities in northern India. These projects have been awarded to EDEN Renewables India, their solar photovoltaic equally owned joint venture in India, it said. With a planned production of nearly 1,200 GWh (gigawatt hour) per year, these solar PV (photovoltaic) projects will generate the energy required to meet the annual electricity needs of 1.1 mn Indian households. The construction is due to start by the end of this year and commissioning is expected towards the end of 2020, the company said. EDEN Renewables India has been building and operating solar projects jointly owned by the two partners in India since 2016. It currently has 207 MW of projects in Rajasthan, Uttrakhand and Madhya Pradesh.

Source: ***Business Standard***

Uttarakhand government plans to produce green power with pine needles

9 July. In the summer of 2016, helicopters fitted with water tanks poured gallons to control raging forest fires in Uttarakhand that had claimed five lives and destroyed 2,200 hectares of jungle. The forest fires issue reached the Supreme Court as infernos again created havoc in the hill state. Scientists said the main culprit behind this spread every year in the state is pine needles, which quickly catch fire. By a government estimate, 16.4 percent or 399,329 hectares of the total forest area is covered by chir pine forest. Now, the state government has started an effort to produce electricity from the pine needles, locally known as pirul, to reduce their spread in the jungle. It has issued Letters of Award to 21 companies for this purpose, under a policy announced last year. These companies would produce a total of 675 kilowatt (kW). So far, 12 agreements have been signed between these companies and the government. Uttarakhand Power Corp, the state power distribution company, would sign separate power purchase agreements with these companies, to buy electricity at ₹7.54 a unit.

Source: ***Business Standard***

Two natural gas-powered thermal plants to be set up in Chennai

9 July. Tamil Nadu Generation and Distribution Corp Ltd (TANGEDCO) will set up two new natural-gas-based thermal units in North Chennai, Chief Minister Edappadi K Palaniswami said. The units, each with a capacity of 730 MW, will come up on the erstwhile GMR power plant premises in Basin Bridge. The GMR units were naphtha-based. Most thermal units of TANGEDCO are coal-based. Tamil Nadu has only 516 MW of thermal plants that are natural gas-based and much of that is in the private sector. The two new projects are expected to cost more than ₹50 bn. The GMR units were decommissioned in 2018. The GMR units initially used diesel as fuel. Later it shifted to naphtha. The project became unviable when naphtha prices went through the roof. GMR had four units, each with a capacity of 46 MW. Pollution was another reason for shutting down the GMR plant. The government has also allocated ₹30 bn to replace equipment in all thermal units owned by TANGEDCO to prevent air and water pollution.

Source: ***The Economic Times***

Future renewable energy investments to be hit by renegotiation of signed PPAs in Andhra Pradesh

8 July. The ongoing attempts by the Andhra Pradesh government to renegotiate existing wind and solar PPAs (power purchase agreements) without mutual consent may adversely impact investor sentiment and future investments in the sector, ratings agency ICRA said. The state government has constituted a High-Level Negotiation Committee (HLNC) to review, negotiate and bring down the cost of wind and solar PPAs tied-up by the state discoms (distribution companies). The committee comprises the Finance Minister, Energy Minister and other related officials. Its functions include reviewing the high cost wind and solar agreements, negotiating and bringing down the prices of wind and solar power PPAs and making suitable recommendations. The committee is to be guided by the lowest wind and solar power rates in the corresponding years, prevailing rates and opportunity cost of power purchase for the discoms.

Source: ***The Economic Times***

Sitharaman's maiden Budget dashes hopes of renewable energy developers

6 July. Bereft of any incentive or subsidy, the Union Budget for 2019-20 has come as a dampener to the renewable energy sector. The Budget's muted focus on green energy and tepid hike in allocation for the Ministry of New & Renewable Energy (MNRE) has cast doubts on the government's target to achieve 225 GW of

renewable energy installs by 2022. The Budget has marginally raised the allocation for MNRE to ₹52.55 bn from last year's ₹51.47 bn. Though the Budget has a thrust on renewable energy, it is not complemented by enhancing the outlays for the sector. The Budget has an outlay of ₹9.2 bn for wind power, ₹30 bn for solar power (both grid and off grid) and ₹5 bn for the green energy corridor that aims to synchronise electricity produced from renewable sources with conventional power stations in the grid. In her Budget speech, Union Finance Minister Nirmala Sitharaman said the government will use the approach of Mission LED (light emitting diode) bulb to promote the use of solar stoves and battery chargers in the country.

Source: ***Business Standard***

Government to rope in global firms to set up manufacturing units for solar cells, batteries, charging infra

5 July. The government will launch a scheme to bring in global firms for setting up mega manufacturing plants in India for solar cells, batteries and solar charging infrastructure through auction and provide tax benefits on these investments. The scheme was proposed in the General Budget presented by Finance Minister Nirmala Sitharaman. Sitharaman said the scheme will include units in the fields of solar photovoltaic cells, lithium storage batteries, solar electric charging infrastructure, computers servers, laptop etc. Inadequate domestic solar equipment manufacturing capacity has been an issue for the past many years especially in view of India's ambitious renewable energy target of having 175 GW by 2022. According to Industry estimates, solar cell and module manufacturing capacity in the country is about 12GW. The project developers depend heavily on imports of equipment for setting up solar power capacities in India. According to the Economic Survey tabled in Parliament, India has the potential for $30 bn annual investment in renewables in next decade and even beyond that in view of the target of having 175 GW of clean energy by 2022. In the budget, the government has proposed ₹123.53 bn investment by Indian Renewable Energy Development Agency and Solar Energy Corp for this fiscal, up from ₹108.35 bn in 2018-19.

Source: ***Business Standard***

Solar scheme to assure ₹1 lakh income for farmers

4 July. The central government will launch a solar scheme for farmers that will ensure a minimum annual income of ₹1 lakh. Power Minister R K Singh said that farmers can use their land to install solar panels and the power generated will be bought by the government. The farmers who don't have the capital can lease the land to developers to set up the solar panels. If given to the developers, the farmer will get at least 30-35 paise per unit to ensure an annual income of ₹1 lakh. The scheme is ready to be launched within 15-20 days. The Minister said the scheme is part of the government's target to double the income of farmers by 2022.

Source: ***The Economic Times***

Government targets at adding 1.1 GW of hydropower capacity in 2019

3 July. India aims at adding 1,190 MW of hydropower capacity in the current year, which will take the total capacity to more than 50,000 MW. India has 45,399 MW of large hydel plants and 4,594 MW of small ones. Last year, the government had targeted hydel capacity addition of 840 MW but it managed to achieve only 140 MW. This year, central sector NEEPCO (North Eastern Electric Power Corp) aims at adding the highest capacity of 600 MW at Kameng Hydel Power project in Arunachal Pradesh. The government of Himachal Pradesh will be adding another 211 MW in the state. According to the schedule prepared by Central Electricity Authority, the country is likely to cross the 50 GW installed capacity mark this month if NEEPCO manages to commission its proposed unit 1 and 2 of the Kameng project. During April and May, hydel projects generated 13 percent of the total power generated by conventional power generation capacity including thermal, nuclear and hydel. Hydel

generation achieved a near 38 percent growth in comparison to the previous corresponding period. Last year, hydel power plants achieved a 7 percent year-on-year growth in power generation at 135 bn units. They contributed 10 percent of the total power generation for the year among conventional power generation sources. At present, the largest hydel generation capacity is in north India at 19.7 GW followed by south at 11.77 GW. West India has a total installed capacity of around 7.55 GW followed by east at 4.94 GW.

Source: ***The Economic Times***

Delhi Police goes green, signs pact to implement rooftop solar energy systems

3 July. The Delhi police will set up rooftop solar energy systems in over 200 of its buildings across the city. A pact in this regard was signed between Solar Energy Corp of India (SECI) and the Delhi police. Under this, SECI - a PSU (Public Sector Undertaking) under the Ministry of New and Renewable Energy (MNRE) and the government's nodal agency for implementation of the National Solar Mission, will support the implementation of grid-connected rooftop solar photovoltaic systems on the establishments of Delhi police. With this project, it is estimated that Rooftop Solar Systems of total capacity of about 3-4 MW will be implemented across various Delhi Police buildings. Lauding the green initiative, MNRE secretary Anand Kumar said solar energy is economical as well as environmental friendly.

Source: ***Business Standard***

Andhra Pradesh to issue recovery notices to all wind, solar power gencos

3 July. The Y S Jaganmohan Reddy government in Andhra Pradesh has decided to issue recovery notices to all wind and solar power generating companies (gencos) for what it terms as the loss they caused to distribution companies. In an order, the government also directed its electricity distributors to cancel short-term power purchase agreements with Lanco Infratech and Spectrum group. Gas allotted to the two projects will be reallocated to GMR Energy's Vemagiri plant. It also cancelled allotment of 5,000 acres to Greenko's wind solar hybrid project in Anantapur. The state's power distribution companies are in poor financial health and the new chief minister has blamed renewable energy projects signed at rates higher than in other states by the previous Chandrababu Naidu government for this. Andhra Pradesh is one of the leading states in the use of renewable energy, with about 8,364 MW of solar and wind projects — 6,614 MW of these are commissioned and the rest are under construction.

Source: ***The Economic Times***

Gujarat to increase green energy capacity to 30 GW by 2022

3 July. Gujarat government, which allocated ₹10 bn for a new rooftop solar power generation scheme, also announced plans to increase power generation capacity from renewable sources to 30,000 MW in the next three years. This number is more than three times the current renewable energy capacity. The state also plans to sell a third of this power to other states in 2022. In 2013, renewable energy capacity in Gujarat was 4,126 MW, which has risen to 8,885 MW, Finance Minister Nitin Patel said, while presenting a modified budget for 2019-20. Patel announced a new rooftop solar generation scheme that aims to cover 2 lakh families. Scheme beneficiaries will get a 40 percent subsidy on the costs of generations systems of up to 3 kilowatt (kW) and a 20 percent subsidy for systems with capacities between 3 kW and 10 kW. Gujarat has an installed capacity of 6,000 MW at wind farms, according to the Socio-Economic Review 2018-19.

Source: ***The Economic Times***

INTERNATIONAL: OIL

Saudi Aramco awards $18 bn in contracts to boost capacity at Marjan, Berri oilfields

9 July. Saudi Aramco has awarded 34 contracts with a total value of $18 bn for engineering, procurement and construction projects at its Marjan and Berri oilfields, the company said. Aramco plans to boost production capacity at the two fields by 550,000 barrels per day (bpd) of Arabian crude oil and 2.5 bn standard cubic feet a day of gas, the company said. The company's maximum sustained oil output capacity is currently 12 mn bpd. Saudi companies account for 50 percent of the awarded contracts in a bidding process that involved more than 90 companies and institutions. The offshore oilfield development project aims to increase the Marjan Field's production by 300 thousand barrels of oil per day of Arabian Medium Crude Oil, process 2.5 for bn standard cubic feet per day of gas, and produce an additional 360 thousand barrels of oil per calendar day of ethane. Aramco plans to add 250,000 barrels of Arabian Light Crude per day from the offshore Berri oilfield.

Source: ***Reuters***

US crude oil output seen rising to record high in 2019: EIA

9 July. US (United States) crude oil production will rise to an all-time high of 12.36 mn barrels per day (bpd) in 2019 from a record high of 10.96 mn bpd last year, the Energy Information Administration (EIA)'s Short Term Energy Outlook (STEO) said. The latest July output projection for 2019 was up from EIA's 12.32 mn bpd forecast in June. EIA also projected US petroleum and other liquid fuels consumption would rise to 20.70 mn bpd in 2019 from 20.45 mn bpd a year ago. The 2019 demand projection in the July STEO report was up from EIA's 20.64 mn bpd forecast for the year in June.

Source: ***Reuters***

Iran accuses US of using oil sanctions to gain market clout

8 July. Iran's Oil Minister Bijan Namdar Zanganeh has accused the United States (US) of using sanctions to "shock" the global oil supply and gain market clout for its booming shale oil production. Washington abandoned a landmark 2015 nuclear deal between Tehran and world powers last year and reimposed sanctions on the Islamic republic's crucial oil sales as well as other parts of the economy. New technology that allows for extracting oil and gas from shale rock formations has led to a boom in oil production in the US in recent years. The Minister said that according to US figures, shale oil's breakeven cost can be as low as $40 per barrel. The US is currently the world's biggest oil producer followed by Russia and Saudi Arabia, and is set to become a net exporter from 2021, according to the International Energy Agency. The White House said in April that tightening sanctions on Iran will have "no material impact" on oil prices given the large supply of US oil on the global market.

Source: ***Arab News***

Seized Iran supertanker was loaded to capacity with crude oil: Gibraltar government

8 July. Tests have shown an Iranian supertanker seized in Gibraltar was fully loaded with crude oil, the government of the British territory said. British Royal Marines boarded the ship, Grace 1, off the coast of Gibraltar and seized it over accusations it was breaking sanctions by taking oil to Syria.

Source: ***Reuters***

Saudi Arabia keeps its oil output steady in June: OPEC

5 July. Saudi Arabia has pumped 9.782 mn barrels of oil per day in June, OPEC (Organization of the Petroleum Exporting Countries) said, up from 9.67 mn barrels per day (bpd) in May. The world's top oil exporter kept its crude production below its output target of 10.3 mn bpd under an OPEC-led global oil reduction pact, to reduce inventories and support prices. OPEC and its allies led by Russia agreed to extend oil output cuts until March 2020, as the global economy weakened and US (United States) production soared.

Source: ***Reuters***

Poland's PKN calculating losses for claims over tainted Russian oil: CEO

5 July. Poland's biggest oil refiner PKN Orlen is calculating losses related to tainted Russian oil supplies and will submit its claims, CEO (Chief Executive Officer) Daniel Obajtek said. Russia halted oil supplies through its Druzhba export pipeline in April after the discovery of excessive levels of organic chloride, which can damage refinery equipment. Supplies of clean oil to Poland partially resumed in June. PKN and its smaller rival Lotos relied on seaborne oil supplies and existing inventories to keep their refineries working during the suspension of Russian deliveries.

Source: *Reuters*

Iraq, Oman plan cooperation in O&G sector

4 July. Iraq and Oman signed a Memorandum of Understanding (MoU) to cooperate in the oil and gas (O&G) sector, including the possibility of building a shared refinery in Oman for processing imported Iraqi crude, the Iraqi oil ministry said. Iraq will aim to export crude to Oman, according to the MoU, import oil products from there and build oil storage facilities in both countries, the ministry said. The two countries will also explore prospects of cooperation and investment in exploring and producing O&G.

Source: *Reuters*

INTERNATIONAL: GAS

Brazil's Petrobras strikes deal with regulator to sell natural gas assets

9 July. Brazilian state-owned oil firm Petroleo Brasileiro SA (Petrobras) has reached an agreement with anti-trust regulator Cade to sell off a series of natural gas transportation and distribution assets, the company said. Petrobras said it had pledged to sell stakes in pipeline networks including a 10 percent stake in Nova Transportadora do Sudeste SA, 10 percent in Transportadora Associada de Gas SA and 51 percent in Transportadora Brasileira Gasoduto Bolivia-Brasil SA. The deal comes as Brazil's government seeks to break up the company's dominance of the sector in a plan that Economy Minister Paulo Guedes has said will deliver "a shock of cheap energy" to the country.

Source: *Reuters*

Bangladesh protests against gas price rise

7 July. Bangladesh's Left Democratic Alliance led a protest against the government's raising of the price of natural gas. Almost all the oppositions, including the country's largest opposition Bangladesh Nationalist Party, supported the protest. Bangladesh Energy Regulatory Commission raised natural gas prices by 32.8 percent on average for all users effective from 1 July, the first day of the country's fiscal year. The business community was also protesting against the decision to raise the gas price, a critical input for industry. Bangladesh Garment Manufacturers and Exporters Association said that the gas bill will take up around 1.5 percent of the manufacturing cost after this hike, an almost 1 percent increase in production cost.

Source: *Reuters*

Dutch government must explain how it will end Groningen gas extraction

3 July. The Dutch government's top advisory body called for a clearer explanation from the minister of economic affairs and climate policy, Eric Wiebes, regarding how natural gas extraction at Groningen will be ended. Output at Europe's largest onshore gas field reached 88 billion cubic meters (bcm) in 1976 but tremors blamed on drilling in recent years have damaged buildings and forced authorities to slash production. Following a 3.4 magnitude earthquake, the government last year vowed to halt output at Groningen by 2030 and to lower production as quickly as possible in the coming years. The minister must explain more clearly how he expects to end gas extraction, the Council of State's Administrative Jurisdiction Division (AJD) said. The Groningen field is operated by NAM, a joint venture between Royal Dutch Shell and Exxon Mobil. The Dutch gas sector regulator has said output should be limited to 12 bcm next year to limit risks. But the government has repeatedly said such a step would lead to shortages, as the Netherlands still depends on Groningen gas for a large

part of its energy supply. Plans to reduce demand for Groningen gas include building extra capacity to convert high-caloric imported gas to the low-caloric gas needed for the Dutch network. The AJD said the minister had set the level of gas extraction properly for the current gas year.

Source: *Reuters*

Gazprom signs 5 year natural gas contract with Turkmenistan

3 July. Gazprom has signed a 5-year contract with Turkmengaz to purchase natural gas, the Russian gas producer said. Turkmenistan will supply Gazprom with up to 5.5 billion cubic meters (bcm) of natural gas per year, the company said. In April, the Central Asian country resumed natural gas exports to Russia after a three-year suspension. The volume agreed is much lower than Turkmenistan's shipments to Russia in the decades preceding the suspension when annual exports could reach 50 bcm. The bulk of Turkmen gas - about 40 bcm out of the total output of 70 bcm - now goes to China and the Ashgabat government is building a pipeline through Afghanistan and Pakistan to India to open up new markets.

Source: *Reuters*

INTERNATIONAL: COAL

German economy ministry expects law on coal exit by end of year

4 July. German economy ministry said it expected a law on the country's coal exit to be decided by the end of the year, adding talks with utility RWE - which wants billions of euros in compensation - were progressing constructively. Under proposals hammered out by a government-appointed commission earlier this year, Germany is to fully phase out coal as an energy source by 2038, hitting operators of such plants including RWE, Germany's largest electricity producer.

Source: *Reuters*

INTERNATIONAL: POWER

Shell entered Japan's open electricity market in March

5 July. Royal Dutch Shell started selling electricity to business customers in Japan in March, relying on its experiences in North America and Europe to expand its market presence. Shell Japan, which registered as a retail seller of electricity at the Japan's Ministry of Economy, Trade and Industry in November last year, is still in the process of building its electricity trading team in Japan.

Source: *Reuters*

China launches its longest extra-high voltage power line

3 July. China's has launched its longest extra-high voltage (EHV) power transmission line, connecting the far western region of Xinjiang and the eastern province of Anhui. The project aims to help meet increasing power demand in industrialised eastern regions and reduce the amount of wasted electricity in the west. As part of Beijing's anti-pollution campaign, new coal-fired power utilities have been banned in the smog-prone east of the country. The 3,324 kilometre (2,065 mile) transmission line, with voltage of 1,100 kilovolt (kV), is designed to transmit 66 bn kWh (kilowatt hour) of electricity a year. Most of the electricity transmitted via the line will come from the Zhundong coal-fired power plant in northern Xinjiang, which has installed power generation capacity of 28 GW. China has been promoting cross-region electricity transmission lines, especially EHV projects as they have bigger transmission capacity and smaller line losses compared to ordinary lines. According to the State Grid Corp of China, the country had 18 EHV lines with overall transmission length of 27,570 kilometre by the end of June. By the end of 2018, China had cross-region electricity transmission capacity of 136 GW, according to data from China Electricity Council.

Source: *Reuters*

INTERNATIONAL: NON-FOSSIL FUELS/ CLIMATE CHANGE TRENDS

China's war on pollution could boost solar power

9 July. China's efforts to reduce chronic air pollution could increase its ability to generate solar power by up to 13 percent by allowing more sunlight to reach the earth, according to a new study. China's so-called photovoltaic potential fell by an average of up to 15 percent between 1960 and 2015 as a result of pollution, climate researchers from Switzerland, the Netherlands and China said in a report. Reverting back to 1960s radiation levels could increase power generation by 12 percent to 13 percent, the researchers said, boosting Beijing's efforts to increase solar's contribution to the national grid and bring down costs. China has been working to curb choking levels of pollution by cutting coal use, improving fuel standards and encouraging cleaner forms of industry and energy. The country's total installed solar capacity stood at 170 GW at the end of 2018, about 9 percent of total generating capacity. Solar last year produced 177.5 TWh (terawatt hour) of electricity, about 2.5 percent of the total. China is keen to boost the profitability of solar firms in order to reduce the subsidies paid to renewable energy providers, with the rapid rise in new capacity creating a payment backlog expected to reach 60 bn yuan ($8.7 bn) by next year. The average price paid to solar producers has already been cut from more than 1 yuan/kWh in 2011 to around 0.3 yuan per kWh (kilowatt hour) this year. China is launching a series of subsidy-free solar and wind power plants this year.

Source: ***Reuters***

Wind power harmful to birds and worms: Russia's Putin

9 July. Russian President Vladimir Putin questioned the use of wind power, saying wind turbines were harmful to birds and worms. Russia, a world-leading producer of fossil fuel, is lagging other countries in its development of renewable energy sources, such as solar and wind-powered energy. Wind power is rarely used in the country to generate electricity. Enel Russia pledged €90 mn to build a power generation facility by 2024 with a capacity of 71 MW. Putin said that people would not like to live on a planet dotted with "rows of wind-powered generators and covered by several layers of solar panels".

Source: ***Reuters***

Portugal's solar auction draws huge demand, winners to be named in August

8 July. Portugal's huge auction of solar energy capacity drew a demand about nine times the offered 1,400 MW, requiring a second phase to decide the winners of almost all licenses and the government expecting an investment of up to €1 bn. The investors had sought as much as over 10,000 MW of new capacity. Environment and Energy Transition Minister Joao Pedro Matos Fernandes said many investors were foreign. Out of 24 locations to install solar panels, only one found no bids, and one had an instant winner, while 22 licenses will require auctions where bidders offering the largest discount off the energy tariff will win, the Minister said. Winners should be announced around 10 August. It is the largest licensing auction of any kind of energy launched in Portugal and represents more than double the current installed capacity of solar energy in the country.

Source: ***Reuters***

Vestas wins 41 MW wind turbine order in Germany

8 July. Danish wind turbine giant Vestas announced it has bagged a 41 MW t order for 12 turbines for the expansion of a citizen-owned wind energy park in Schleswig-Holstein. The order has been placed by Bürgerwindpark Reußenköge GmbH & Co. KG. The current wind park has an estimated annual production of around 600 megawatt hour (MWh), which can cover the annual electricity consumption of half a million German citizens. With this order, the wind park will have a total installed capacity of 210 MW with the possibility of a further expansion up to 300 MW in the coming years, making it one of the world's largest citizen-owned wind projects.

Source: ***The Economic Times***

Building toward large-scale use of renewable energy in Japan

8 July. The Paris agreement has accelerated worldwide momentum for strengthening global warming countermeasures. Enhancing zero-carbon energy is an urgent task as the Japanese government aims to derive 44 percent of power from renewable and nuclear power by 2030. The use of solar has been growing rapidly in Japan, but still, when we look at the power mix ratio in 2016, renewables other than hydroelectric, such as solar and wind, accounted for only 7 percent, compared with 8 percent for hydro. Increasing renewable energy will have to be a pillar of Japan's energy policy for the foreseeable future. Japan is reportedly rich in biomass reserves, but domestic reserves alone are insufficient to provide enough feedstock to operate large numbers of power stations. The best large-scale hydroelectric power sites in Japan have already been identified and exploited, so there is little potential remaining for new development. For the foreseeable future, the key will be to boost solar and offshore wind power, as onshore wind projects face land use restrictions.

Source: ***The Japan Times***

Czech government approves framework plan for new nuclear plant

8 July. The Czech government has given preliminary approval for a plan by a subsidiary of electricity producer CEZ to build a nuclear power station with the government providing guarantees to help it secure cheaper financing. CEZ is 70 percent state-owned and has previously declined to invest in nuclear alone given high costs and unclear returns. A decision on construction of a unit at the Dukovany site is still years away with suppliers expected to be chosen by 2024. The plan presented by Industry and Trade Minister Karel Havlicek does not specify how to handle economic viability. While the government is keen to build new nuclear power stations, it does not want to pick up the bill, while CEZ has insisted that any investment makes a return for its owners, including minority interests.

Source: ***Reuters***

Lightsource BP makes major Brazil solar acquisition

4 July. Solar energy developer Lightsource BP has acquired a large number of projects in Brazil with a potential to nearly double its current global capacity. The London-based firm, in which BP holds a 43 percent stake, said it bought 1.9 GW of projects from independent renewables developer Enerlife for an undisclosed sum. The utility-scale solar projects are at different stages, from early land permits to more advanced developments with grid connections. Solar power contributes just over 1 percent of Brazil's total electricity generation, which is expected to soar in the coming decades. The Brazilian government awarded licenses for new power generation projects that would add 402 MW of capacity by 2023 at record-low price for solar generation. Enerlife was awarded over 160 MW in five solar projects. Lightsource BP is the largest European utility solar developer with over $3 bn invested across nearly 2 GW of solar projects around the world.

Source: ***Reuters***

Abu Dhabi utility shortlists 24 firms for 2 GW solar plant

3 July. International and local companies are among 24 bidders pre-qualified to build the world's largest single-site solar plant in Abu Dhabi, Emirates Water and Electricity Company (EWEC) said. Abu Dhabi, the capital of the United Arab Emirates, is building a new 2000 MW solar photovoltaic (PV) power project. The successful bidder or consortium would hold a 40 percent stake in the project with the remaining stake held by local entities. EWEC received expressions of interest from 48 leading international and local developers to build the solar project at Al Dhafra in Abu Dhabi. Once completed, the project site will cover an area of 20 square kilometers, almost doubling the capacity of the current largest operational single-site solar PV plant in the world, Noor Abu Dhabi. The new plant is expected to start commercial operations in the first quarter of 2022 and it will lift Abu Dhabi's solar power capacity to 3200 MW.

Source: ***Reuters***

DATA INSIGHT

State-wise Per Capita PDS Kerosene Scenario

State/UT	Allocation (Litres per annum per person)	Sales/Consumption (Litres per annum per person)
Andhra Pradesh	5.4	4.7
A & N Islands	**15.2**	**15.1**
Arunachal Pradesh	7.5	7.4
Assam	**10.3**	**10.3**
Bihar	7.7	7.7
Chandigarh	2.8	0.8
Chhattisgarh	6.7	6.2
Dadra & Nagar Haveli	5.4	5.4
Daman & Diu	3.4	3.4
Delhi	0	0
Goa	3.5	3.5
Gujarat	**10.9**	**10.9**
Haryana	3.5	2.8
Himachal Pradesh	3.5	3.5
Jammu & Kashmir	6.5	6.4
Jharkhand	8	7.9
Karnataka	8.3	7.9
Kerala	3.5	3.5
Lakshadweep	**15.3**	**15.3**
Madhya Pradesh	8.1	8
Maharashtra	5.6	5.5
Manipur	8.6	8.6
Meghalaya	8.6	8.6
Mizoram	6.1	6.1
Nagaland	8.5	8.5
Odisha	9.3	9.2
Puducherry	3.4	3.4
Punjab	3.1	3
Rajasthan	7.2	7
Sikkim	9.4	9.4
Tamil Nadu	4.7	4.7
Telengana	4.9	4.8
Tripura	**10.5**	**10.5**
Uttar Pradesh	7.8	7.8
Uttarakhand	3.5	3.5
West Bengal	**10.3**	**10.3**
All India	7.2	7.1

Note: Bold rows denotes the top 5 states/UTs in terms of per capita PDS allocation/consumption. As per the Census 2011 among the top 10 populated states in India while West Bengal is ranked 4th, Gujarat ranked at the 9th place.

Source: Lok Sabha Questions for Ministry of Petroleum & Natural Gas

This is a weekly publication of the Observer Research Foundation (ORF). It covers current national and international information on energy categorised systematically to add value. The year 2019 is the sixteenth continuous year of publication of the newsletter. The newsletter is registered with the Registrar of News Paper for India under No. DELENG / 2004 / 13485.

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