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8 April 2016

[MARCH 2016: MIXED MESSAGES FOR THE ENERGY INDUSTRY]

“By mid-March crude price gain over February increased to 40 percent and by the end of March the gain was 50 percent. However oil producers were reported to be hedging their bets by locking in sales of future production as they were not hopeful of further increase in oil prices. But concerns over future oil supply reductions also grew. Global rig counts were reported to be down...”

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[INTERNATIONAL: POWER]

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- China Shenhua considers taking stakes in nuclear projects
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[RENEWABLE ENERGY / CLIMATE CHANGE TRENDS]

NATIONAL.....

- Govt offices to turn solar power generating centres
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- Germany says it's open to talks to strengthen EU carbon market
- Climate change may flood lower Manhattan by 2100: Kerry
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- Kenya's REA to build 55 MW solar power plant
- SunPower wins 500 MW solar power projects in Mexico
- Enel inaugurates world's first triple renewable hybrid power plant in US
- Mexico first power auction awards 1.7 GW of wind, solar

COMMENTS.....

International monthly energy briefing

March 2016: Mixed Messages for the Energy Industry

Lydia Powell, Akhilesh Sati and Ashish Gupta, Observer Research Foundation

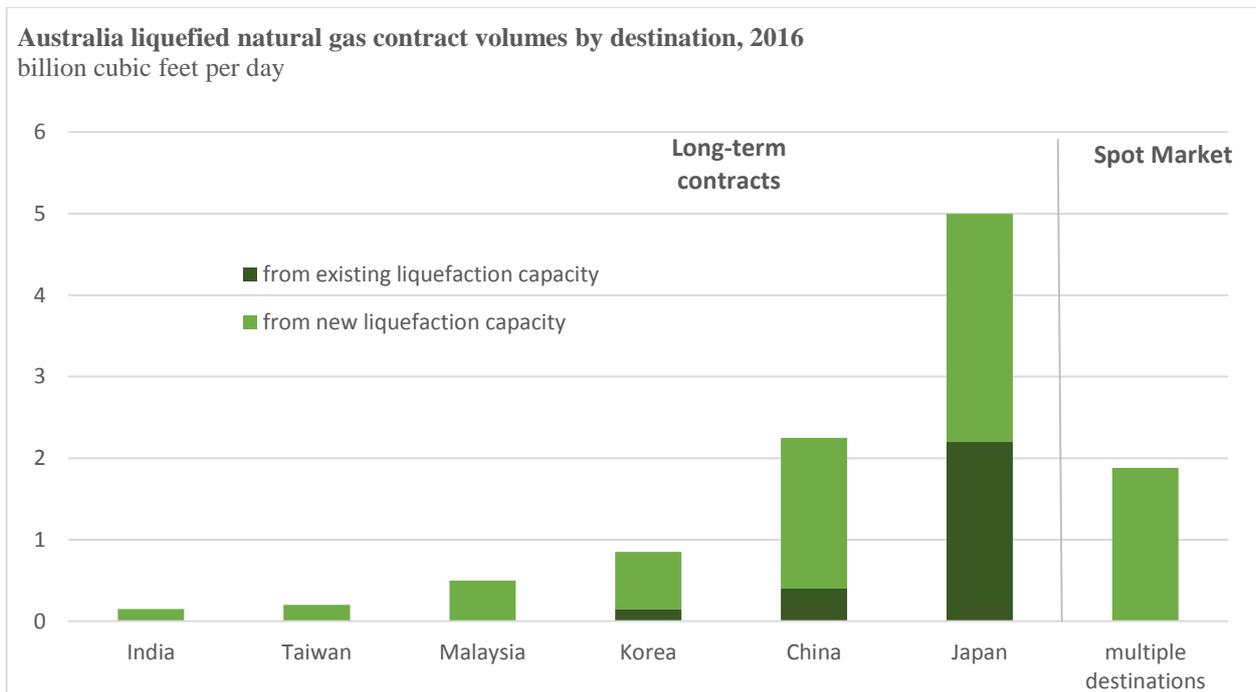
Conventional Fuels

Oil & Gas

The month of March began with some light at the end of the rather long and dark tunnel for the oil industry. Oil prices increased by 30% in the first week of March compared to price in February when price touched \$35/bbl. By mid-March crude price gain over February increased to 40% and by the end of March the gain was 50%. However oil producers were reported to be hedging their bets by locking in sales of future production as they were not hopeful of further increase in oil prices.

But concerns over future oil supply reductions also grew. Global rig counts were reported to be down, but producers in Africa and Latin America were reported to be especially hard hit by low prices leading to a significant fall in rig count. Some analysts predicted that this could have grievous consequences for future oil supply and consequently oil prices.

However for the time being, the global oil market remained over-supplied and inventories in OECD countries continued to rise. OPEC could not negotiate a production cut as Iran insisted that it would not accept the OPEC-Russia production freeze until its production reached pre-sanction levels.



Source: EIA

Goldman Sachs defended its prediction of oil prices falling below \$20/bbl and dismissed the price rally as self-defeating because it did not see any real supply deficit in the market. On the other hand the International Energy Agency remained optimistic that oil prices had touched bottom and that supply disruptions from Nigeria and Iraq combined with falling production from the United States and a weak dollar could boost prices in the future. Overall not many in the oil industry were convinced that the price rally was for real.

Iraq which had signed contracts that offered fixed payments to companies such as Exxon, Shell and BP to produce oil in Iraq at a time when oil prices were sky high was reported to be in a fix as it had to pay nearly \$2 billion to these companies despite the dramatic fall in the price of crude oil. Iraq was reported to be trying to re-negotiate the contracts so as to link payments to crude prices. On the other hand Iran was reported to be looking at a good flow of revenue for investment to boost oil production as it started receiving payments that were frozen on account of sanctions. Saudi Arabia is apparently not immune to the fall in oil prices as it is said to be looking to borrow \$8 billion to make up the deficit in its budget.

Meanwhile Gazprom was reported to have secured a €2 billion loan from China, the largest ever from China to a Russian company. Gazprom is said to have reduced its annual capital expenditure to \$17 billion compared to over \$40 billion in 2011. The much hyped 'power of Siberia' pipeline project designed to carry gas from Russia to China was reported to be losing support. Some observers say that Russia's oil output may not increase beyond its post-Soviet record of 10.9 million barrels per day achieved in January 2016 primarily on account of its inability to invest in new fields.

The shale oil & gas sector of the USA was rocked by the untimely death of Aubrey McClendon the former CEO of the Chesapeake energy, a leading player in the shale gas sector just a day after he was indicted over an oil & gas lease rigging scam.

China's oil imports were reported to be soaring as it sought to take advantage of low prices. As per the policy of the Chinese government the fall in crude prices below \$40/bbl are not passed to the retail consumer which allows higher returns for refiners.

The British government came to the aid of its struggling oil industry by doing away with the 35% petroleum tax and reducing another tax on profits from 20 to 10%. Naturally the industry welcomed the move. The troubled Brazilian oil company Petrobras announced its largest ever quarterly loss of \$10.2 billion and also wrote off over \$13 billion worth of oil field assets.

The Wall Street Journal reported that energy loans that could default this year is likely to increase by 50%. 51 energy companies were reported to have filed for bankruptcy since 2015. The total debt of the oil & gas sector is estimated to be about \$3 trillion in 2014, three times the level in 2006. On the gas front, Gorgon LNG project in Australia started operations after sucking in an investment of over \$54 billion. Not many saw this as a moment of glory given the depressed market for gas.

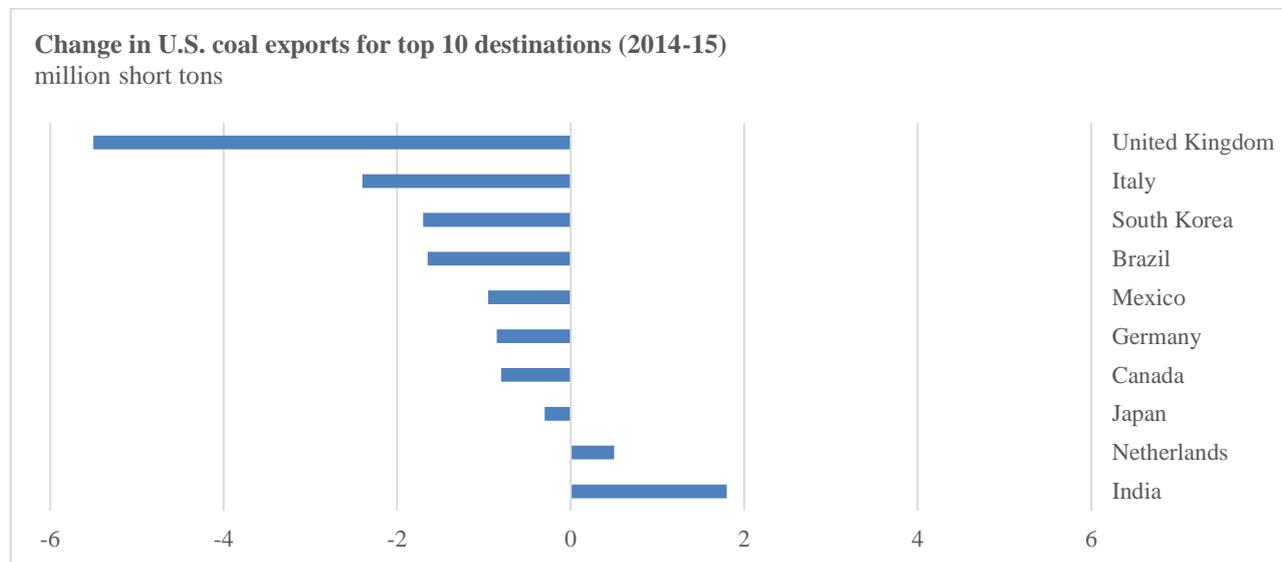
Coal & Power

Globally March continued to be bad for the coal sector. Coal production in the USA continued to slide, finishing the month with a 38% year on year decline. Declining coal production prompted many coal players in the Powder River Basin of USA to announce huger layoffs. Peabody Energy, the world's largest private sector coal company is said to be nearing bankruptcy. Coal miners in USA had hoped that exporting abroad would offer a lifeline. But coal exports from the USA are said to be collapsing, falling by 23% in 2015 alone. That was the third consecutive year of declining exports and exports are reported to be nearly half of what they were at their peak in 2012. India is seen as a growth opportunity for American miners. Coal producers across the world continue to be under relentless pressure from falling demand, depressed prices, and environmental regulation. The decline for coal producers is largely seen as structural with little prospect of a rebound in sight. A growing number of large banks in OECD countries are said to be ruling out future investments in coal.

In Australia large coal companies continued with their divestment program. Anglo American is reported to have entered into an agreement with a consortium led by Taurus Fund Management to sell 70% interest in the Foxleigh metallurgical coal mine in Queensland, Australia. Yancoal another big Australian major mining

player is reported to have lost control of the Ashton, Austar and Donaldson coal mines in New South Wales as part of a \$950 million debt funding agreement.

In a recent study, Price Waterhouse Coopers concluded that Indonesia could exhaust its economically retrievable coal reserves by 2033. The study was based on information from 25 coal mining companies representing around 80% of Indonesia's output and the availability of domestic coal for the 35 GW power generation capacity Indonesia hopes to build by 2019.



Source: EIA

In China too coal production declined as thousands of miners went on strike over months of unpaid wages. The miners' anger spilled into street when the governor of the province said that the company owed employees no back pay.

There was some interesting developments on the nuclear sector. The chief financial officer of Electricite de France is reported to have quit due to his opposition to the Hinkley Point nuclear reactor in the UK a deal that could put the company in financial jeopardy according to him. The partially state-owned company has yet to make a final investment decision on the \$26 billion nuclear project, but that could come as soon as April 2016.

Climate Change & Renewables

These are glory days for renewable energy as the developed world pours money into the sector just as it did on non-renewable energy in the 1970s and 80s supposedly to develop the under-developed World. According to a new report from the International Renewable Energy Agency (IRENA), renewables could save \$4.2 trillion if the world doubled its share of renewable energy to 36% by 2030. The report argues that an aggressive ramp up in renewable energy installations not only makes economic sense, but less expensive than not doing it. Given that IRENA was set up to promote renewables one should not be surprised by this pronouncement.

Global investment in renewable energy in 2015 was said to be twice as high as investment in new coal and natural gas power plants. China alone is reported to account for one-third of the \$286 billion invested in clean energy last year. According to a new report, the solar market in the USA is expected to expand by a staggering 119% in 2016 with installations increasing to 16GW from 7.2GW in 2015.

There was some heat in the politics of climate change as the US Securities & Exchange Commission (SEC) ruled that Exxon must offer details climate related risks and on risks related to legislation on climate change to shareholders. Following the Paris agreement, added costs through taxes or any limits on fossil fuel production will reduce long-term shareholder value which according to the SEC the shareholders must be aware of.

Views are those of the authors

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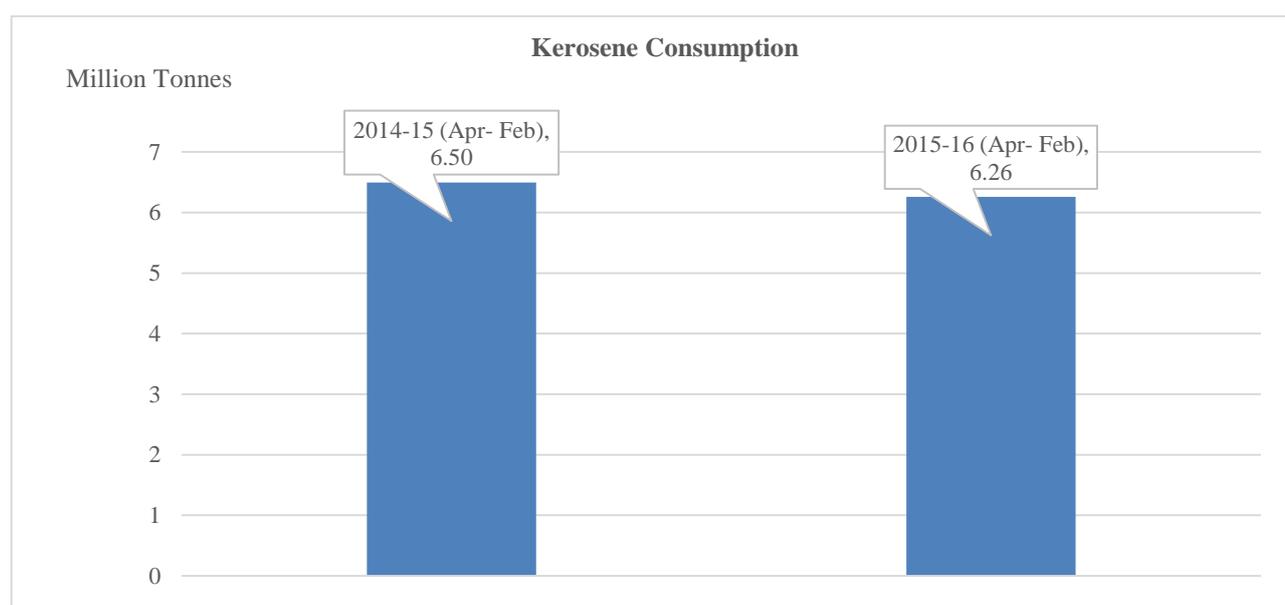
State-wise Allocation of Kerosene

Akhilesh Sati, Observer Research Foundation

State	Allocation (2015-16)	
	Kilo Litres	% share in Total
Uttar Pradesh	15,57,600	17.93
West Bengal	9,43,332	10.86
Bihar	7,96,704	9.17
Gujarat	6,57,336	7.57
Maharashtra	6,26,256	7.21
Madhya Pradesh	5,89,824	6.79
Karnataka	5,09,832	5.87
Rajasthan	4,95,180	5.70
Orissa	3,89,724	4.49
Tamil Nadu	3,41,724	3.93
Assam	3,21,372	3.70
Andhra Pradesh	2,66,676	3.07
Jharkhand	2,62,572	3.02
Telengana	1,74,480	2.01
Chhattisgarh	1,72,272	1.98
Kerala	1,17,780	1.36
Haryana	88,344	1.02
Punjab	85,380	0.98
J & K	81,180	0.93

State	Allocation (2015-16)	
	Kilo Litres	% share in Total
Tripura	38,400	0.44
Uttarakhand	35,196	0.41
Meghalaya	25,428	0.29
Himachal Pradesh	24,144	0.28
Manipur	23,388	0.27
Nagaland	16,752	0.19
Arunachal Pradesh	10,320	0.12
Mizoram	6,672	0.08
A&N Islands	5,772	0.07
Sikkim	5,712	0.07
Goa	5,136	0.06
Puducherry	4,260	0.05
Chandigarh	2,988	0.03
Dadar & Nagar Haveli	1,836	0.02
Lakshadweep	984	0.01
Daman & Diu	828	0.01
Delhi	-	-
Total	86,85,384	100

Source: Press Information Bureau



Source: PPAC

NEWS BRIEF

[NATIONAL: OIL & GAS]

Upstream.....

ONGC gets green nod for ₹ 3.5 bn drilling project in Gujarat

April 5, 2016. Oil and Natural Gas Corp (ONGC) has received green nod for its ₹ 350 crore project of drilling 22 exploratory wells in NELP-9 blocks located at Banaskantha, Gandhinagar and Ahmedabad districts of Gujarat. According to the proposal, wells would be drilled in blocks CB-CNN-2010/1, 6 and 9, which were awarded to ONGC way back in March 2012 through the NELP-9 bidding process. The petroleum exploratory licence to start the activities as per the production sharing contract (PSC) was granted in February 2013. The initial contract period is seven years. The clearance has been granted only for exploratory drilling of 22 wells.

In case development drilling is to be done in future, the company should take prior clearance from the ministry. Among conditions specified, the company has been asked to prepare an oil spillage prevention scheme and comply with the guidelines of disposal of solid waste, drill cutting and drilling fluids for onshore drilling operations. The company has been asked to take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. On completion of drilling, the company has been asked to plug the drilled wells safely and obtain a certificate of environment safety from the authority concerned. ONGC is engaged in hydrocarbon exploration and production activities in about 26 sedimentary basins of India, owns and operates more than 11,000 kilometres of pipelines in India and contributes 80% of the country's crude oil production. (www.business-standard.com)

CAG raps GSPC for mismanagement, investment in KG block

April 2, 2016. The Comptroller and Auditor General (CAG) has called into question state PSU Gujarat State Petroleum Corporation's (GSPC's) investment of ₹ 19,576 crore in its Krishna Godavari (KG) block project, saying "future prospects" of the block remain shrouded in "uncertainty". In 2005, Narendra Modi as Gujarat chief minister had announced that GSPC had struck 20 trillion cubic feet gas in the KG basin block, named 'Deendayal block', where commercial production is yet to start. CAG painted a gloomy picture of GSPC's finances, as its borrowing stood at ₹ 19,716 crore as of March 2015, a jump of 177% since 2011. The activities in KG block also caused an increase in company's borrowings to ₹ 19,716.27 crore as of March 31, 2015, which was 177% higher than ₹ 7,126.67 crore as of March 31, 2011. (www.business-standard.com)

ONGC finds hydrocarbon deposit in Mizoram

March 31, 2016. ONGC has found hydrocarbon (gas) deposits at Meidum area in Kolasib district, Mizoram Industries Minister H Rohluna said. Rohluna said that oil exploration companies have been conducting tests on the gas found while drilling and hydro-fracturing have been conducted to find out whether more deposits were available. He said that the companies engaged in the hydrocarbon exploration have already paid ₹ 22.06 crore to the State Government as Petroleum Exploration Licence (PEL) fees till date. (www.assamtribune.com)

Downstream.....

IOC pulls off record crude processing at 56 mt in FY16

April 1, 2016. Indian Oil Corp (IOC) said it has achieved a new record crude oil processing of 56.1 million tonnes (mt) in 2015-16 fiscal, with highest ever distillate production. IOCs nine refineries operated at 103.5 percent of the installed capacity in the fiscal. IOC said that with focused efforts towards energy conservation, the refineries achieved lowest fuel and loss, Specific Energy Consumption and Energy Intensity Index at 8.53 percent, 53.8 and 101.2 respectively, as compared to the previous best of 8.77 percent, 54.4 and 104.5 for the year 2014-15. The commissioning of 15 million tonnes a year Paradip refinery in Odisha IOCs refining capacity to 69.2 million tonnes per annum. (indiatoday.intoday.in)

India's March Iran oil imports top 500k bpd

April 4, 2016. India's Iran oil imports topped 500,000 barrels per day (bpd) in March, highest in at least five years, as private refiner Reliance Industries resumed purchases after a multi-year lay-off, preliminary tanker data shows. Indian refiners together imported 506,100 bpd oil from Iran last month, a jump of about 135 percent from February, the data showed. In March of last year, the refiners halted imports from Iran to keep shipments within the parameters of the temporary nuclear deal then in force. Iran has said it will continue increasing its oil production and exports until it reaches the market position it held before the imposition of sanctions. In the fiscal year ended on March 31, Indian refiners shipped in 14.4 percent more oil from Iran at about 251,100 bpd, the data showed. The increase was the largest annual growth since the 2007/08 fiscal year, according to data. Essar Oil was the biggest importer of Iranian oil in March with about 207,400 bpd oil, followed by about 130,000 bpd by Mangalore Refinery and Petrochemicals Ltd and about 90,600 bpd by Reliance, its first shipments in about six years. Reliance had halted Iranian oil imports in 2010 because it was worried that the threat of U.S. sanctions on companies doing business with the Islamic republic would complicate its efforts to boost market share for its fuels in the United States. Reliance imported Forozan grade and South Pars condensate from Iran, the data showed. Indian Oil Corp, the country's biggest refiner and not a regular buyer of Iranian oil, shipped in 2 million barrels or about 67,000 bpd from Tehran last month. (www.reuters.com)

GSPC in talks with ONGC to sell stake in gas block

April 1, 2016. Gujarat State Petroleum Corp Ltd (GSPC) is in talks to sell a controlling interest in its Deendayal block asset in Krishna-Godavari Basin to Oil and Natural Gas Corp (ONGC). ONGC is closely looking at acquiring a controlling stake in the GSPC promoted Pandit Deendayal block in KG Basin in Andhra Pradesh. ONGC approved raising \$5 billion for investments in KG Basin. ONGC is being offered at least 50% stake to make it the operator of the block with management control. GSPC had created infrastructure which included sub-sea and inland pipelines, offshore platform and an onshore gas terminal worth ₹ 7,000-8,000 crore. GSPC, the operator of the block with 80% participating interest, is open to selling its entire stake to ONGC which has a proven track record in exploration activities in India. (www.livemint.com)

India first in Asia to buy shale gas from US

April 1, 2016. India has become the first country in Asia to buy United States (US) shale gas after GAIL (India) Ltd booked a ship of liquefied natural gas (LNG) from Cheniere Energy Inc's Sabine Pass plant in Louisiana. GAIL bought the cargo on spot basis and will receive it at the Dabhol LNG import terminal in Maharashtra, the company said. This would mark the start of US LNG exports into India, which last year overtook South Korea as the world's second biggest importer of the fuel on a spot and short-term basis as buyers. The delivered price of the US shale gas cargo is about 5 per million British thermal units. GAIL had previously signed up agreement to buy 3.5 million tonnes of LNG a year for two decades from Sabine Pass. It has also booked 2.3 million tonnes a year capacity in the Cove Point LNG liquefaction terminal in Maryland. The shipments are expected to start in 2017 or 2018. (timesofindia.indiatimes.com)

IOC bids for fuel marketing and retail rights in Myanmar

March 31, 2016. Indian Oil Corp (IOC) has bid for rights to import, store and distribute petroleum products in Myanmar. Myanma Petroleum Products Enterprise (MPPE) invited companies to form a joint venture for import, storage, distribution and sale of all petroleum products except liquefied petroleum gas (LPG) and liquefied natural gas (LNG). A separate tender for cooking gas LPG was floated. IOC had bid for that tender too. MPPE left the fuel distribution business when it was privatised in 2010, but is planning a re-entry into the fast-growing business sector that is marred by widespread dissatisfaction over service standards and fuel quality. In 2010, MPPE transferred 216 filling stations to private companies across the country but it still runs 12 pumps which supply fuel to state-owned vehicles. It also owns four main fuel terminals and 24 sub-fuel terminals. Around 70 private companies run the country's 1163 petrol stations, but few have storage facilities or an import licence. MPPE wants to tie up with foreign companies to expand the business and rehabilitate existing facilities. The joint venture will be for a maximum of 30 years, extendable two 10-year periods. IOC wants to use its just commissioned Paradip refinery in Odisha to ship fuel a short distance across the Bay of Bengal to get to Myanmar. Being

the country's largest fuel retailer, it also has experience of setting up fuel stations and managing logistics, which would be helpful in the nascent market. IOC is among the 11 to have bid for the separate tender to build a new liquefied petroleum gas (LPG) terminal and supply chain business for the distribution and marketing of the cooking and heating fuel. (energy.economictimes.indiatimes.com)

Policy / Performance.....

RBI exploring modalities of oil payments to Iran: RBI Governor

April 5, 2016. The Reserve Bank of India (RBI) is holding discussions with Tehran on modalities of payment of reported dues of \$6.5 billion for oil imports, RBI Governor Raghuram Rajan said. He, however, did not disclose the quantum of payments to be made to the Middle East country, which is getting ready for a life post sanctions. Indicating that the commitments will be honoured, Rajan said meeting the payment should not be a concern as the country has over \$350 billion in its forex kitty at present. The central bank, which previously facilitated payment of oil import bill to Iran, had agreed to help in creating the payment channels to clear the past dues. (dc.asianage.com)

Petrol price hiked by ₹ 2.19 a litre, diesel by 98 paise

April 4, 2016. Petrol price was hiked by ₹ 2.19 a litre and diesel by 98 paise per litre. Petrol in Delhi will cost ₹ 61.87 per litre as against ₹ 59.68 currently, Indian Oil Corp (IOC) said. Similarly, a litre of diesel will cost ₹ 49.31 compared with ₹ 48.33 at present. The hike comes on the back of a steep ₹ 3.07 a litre increase on March 17 and a ₹ 1.90 a litre hike in diesel rates. While this is the second straight increase in petrol price, this is the fourth straight fortnightly increase in diesel rates. The three hikes in diesel rates since February 16 total ₹ 3.65 per litre. State-owned fuel retailers IOC, Bharat Petroleum Corp Ltd (BPCL) and Hindustan Petroleum Corp (HPCL) revise rates of the fuel on 1st and 16th of every month based on the average oil price and the foreign exchange rate in the preceding fortnight. (timesofindia.indiatimes.com)

World's largest oil firm Aramco plans to invest in India

April 4, 2016. Saudi Oil giant Aramco, the world's largest oil firm with crude reserves of about 265 billion barrels, plans to make major investment in India's petroleum sector as it considers India the most preferred destination to invest at a time when the global economy is in a crisis. Head of Aramco Khalid A Al Falih called on Prime Minister Narendra Modi during which he conveyed that the state-owned company was eyeing India as the most preferred investment destination. Aramco is Saudi Arabia's national oil company with crude reserves of about 265 billion barrels which is over 15 percent of all global oil deposits. The Saudi government plans to sell shares in Aramco and transform the oil giant into an industrial conglomerate. India's ties with Saudi Arabia, one of the world's leading oil producers, have been on an upswing over the last two decades based on burgeoning energy ties. The two countries are keen to move beyond buyer-seller relationship in the sector and go for joint ventures and investment in refineries and oil fields. (economictimes.indiatimes.com)

Chandigarh becomes first kerosene-free city

April 1, 2016. For the first time, a city has been declared kerosene free with sale of subsidised cooking and lighting fuel being stopped in Chandigarh completely. Households have been shifted to LPG to help declare Chandigarh kerosene free. The Petroleum Ministry with the help of Chandigarh Administration has been working for the last few months to make Chandigarh 'a Kerosene Free City'. To facilitate the kerosene beneficiaries getting LPG connections, enrolment camps were organised by state-owned fuel retailers to provide hassle-free LPG connections. Also, deposit-free LPG connections were provided to BPL households and interest free loan scheme was launched for APL households. (www.ndtv.com)

India cuts domestic gas prices 20 percent amid falling global rates

March 31, 2016. India cut the price of locally produced natural gas by 20 percent for the six months beginning April 1 in line with the fall in global prices. Domestic gas prices will be cut to \$3.06 per million British thermal (mmBtu) units based on the gross heat value, the oil ministry's Petroleum Planning and Analysis Cell said. The government had fixed the price at \$3.82 per mmBtu for the previous six-month period. This is the third straight cut since April 2015. The move will dent cash flows at explorers such as Reliance Industries Ltd (RIL) Oil & Natural Gas Corp (ONGC). It may also affect spending plans at ONGC, which approved a \$5.07 billion development in the Bay of Bengal off the country's east coast.

The New Delhi-based company is seeking to maintain its exploration activities in spite of the collapse in oil, while shrinking costs are allowing it to spend less. India sets gas prices using a formula based on U.S., Canadian, U.K. and Russian rates. The government announced a ceiling price of \$6.61 per mmBtu for natural gas extracted from deepsea fields that start production from this year. The cap is effective for the six months to September. (www.bloomberg.com)

ONGC's \$5 bn investment plan not to impact its ratings: S&P

March 30, 2016. Credit rating of state-owned Oil and Natural Gas Corp's will remain unaffected by its decision to invest \$5 billion in KG basin oil and gas field, Standard & Poor's said. ONGC's \$5.07 billion investment in block KG-DWN-98/2 or KG-D5 to produce oil and gas by 2019-2020 is in line with S&P's capex projections. The benefit of new production from KG basin will only accrue starting fiscal 2020. S&P said its corporate credit rating on ONGC continues to be constrained by the sovereign credit rating on India (BBB-/Stable/A-3). S&P has rated ONGC as 'BBB-' with stable outlook. A 'BBB' rating exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation, according to S&P's rating definitions. (economictimes.indiatimes.com)

[NATIONAL: POWER]

Generation.....

NTPC suspends power generation from Farakka

April 5, 2016. An unprecedented dip in the water level of Farakka feeder canal has yet again forced the country's largest power producer, National Thermal Power Corp (NTPC), to suspend generation at five units of Stage I and II of the Farakka Super Thermal Power Station. This has been done in a phased manner from the late hours of April 1. The five units have a combined capacity of 1,600 MW. The lone unit functioning is of 500 MW of stage III. The situation is unlikely to improve in the next 10 days, according to an NTPC. (www.thehindu.com)

NTPC joint venture takes over Patratu power plant

April 4, 2016. Jharkhand handed over assets of Patratu Thermal Power Station (PTPS) to a joint venture company of NTPC and the state government. Terming it a big step in the direction of power generation in Jharkhand to attain self-sufficiency, Jharkhand Bijli Vitran Nigam said the resources, including the PTPS plant, were handed over to the joint venture for setting up 8,000 MW new thermal power unit in two phases.

NTPC in October last incorporated Patratu Vidyut Utpadan Nigam in a joint venture with Jharkhand Bijli Vitran Nigam Ltd for operating the PTPS plant in the state. NTPC holds 74 percent stake in the joint venture while the rest is with the state government. The joint venture will renovate and modernise the performing existing units and further capacity expansion of PTPS. (indiatoday.intoday.in)

7,720 mn units produced from first unit of KKNPP

April 3, 2016. The first unit of the Kudankulam Nuclear Power Plant (KKNPP) has so far produced 7,720 million units, R.S. Sundar, Site Director, Kudankulam Nuclear Power Project, said He said that the daily generation of 972 MW was achieved from the 1000 MW reactor. As for the second unit of KKNPP, nod is awaited to fill fuel. The nod from Atomic Energy Regulatory Board (AERB) is expected soon and fuel filling operation could be done by this month end. Further, he said soil excavation process for setting up third and fourth unit on the premises of KKNPP was underway. (www.thehindu.com)

CIL achieves 536 mt coal output in FY16

April 1, 2016. Coal India Ltd (CIL) has achieved an 8.5 percent growth rate in production at 536 million tonnes (mt) in 2015-16, but missed the output target of 550 mt for the just-concluded financial year. The record coal production and off-take has resulted in unprecedented 28-day average inventory of coal at power plants, Coal Secretary Anil Swarup said. The Secretary had earlier said that CIL might miss the production target of 550 million tonnes for 2015-16 by 10-15 mt due to slump in demand. CIL, which accounts for over 80 percent of the domestic production, is aiming to double the output to one billion tonnes in next four years. (www.newindianexpress.com)

Bajaj synchronises third 660 MW unit of Lalitpur power plant

March 31, 2016. Bajaj group said it has synchronised the third 660 MW unit of its power plant at Lalitpur in Uttar Pradesh. Shishir Bajaj-led group has presence in sugar, personal care products and power businesses among others. First and second units of 660 MW each were commissioned in September 2015 and January 2016, respectively, and have already achieved full load capacity, it said. The third unit is planned for commissioning shortly, which will result in attaining full capacity generation of 1980 MW at the Lalitpur power plant. The Bajaj group with total revenues of \$3.25 billion and an asset base of \$4.4 billion has interests in power, sugar, ethanol, real estate, personal care products and infrastructure. The group's power venture includes Bajaj Energy Pvt Ltd, with 450 MW thermal power generation commissioned in 2012 and the Lalitpur Power Generation Co Ltd with a total of 1980 MW thermal power generation capacity. (www.thehindu.com)

Transmission / Distribution / Trade...

Power Grid board approves ₹ 33.2 bn investment proposals

April 4, 2016. Power Grid Corp of India Ltd (PGCIL) said its board has given approval to investment proposals worth ₹ 3,324 crore, including ₹ 845 crore generation projects in Odisha and ₹ 810 crore solar park in Karnataka. The project is scheduled to commission in June 2018. The board has also approved investment of ₹ 46.57 crore in projects associated with Western Region Strengthening Scheme, ₹ 47.77 crore investment in transmission system for Gadawara STPS of NTPC and ₹ 40.91 crore in transmission system for ultra mega solar park in Anantpur district in Andhra Pradesh. The other proposal approved by the board include powergrid works associated with common transmission system for phase II generation projects in Odisha at an estimated cost of ₹ 844.64 crore, eastern region strengthening scheme at a cost of ₹ 454.11 crore and transmission system for ultra mega solar power park at Tumkur in Karnataka at an estimated cost of ₹ 810.48 crore. (www.business-standard.com)

Policy / Performance.....

LED bulb prices in range of ₹ 75-95: EESL

April 5, 2016. The procurement cost of LED bulbs has fallen further to ₹ 54.90 per unit from ₹ 64.41 under Domestic Efficient Lighting Programme of the government, which will further reduce the retail price to ₹ 75-95. The prices will be different for different states with consumers in Delhi and Haryana paying ₹ 75 for the LED bulb, while those in Rajasthan paying ₹ 80. In Maharashtra, the bulb will cost ₹ 85, in Jharkhand ₹ 90 and in Jammu & Kashmir ₹ 95. Energy Efficiency Services Ltd (EESL) pooled the prices of all the previous procurements and the benefit of this reduction will be directly passed on to the consumers across states, it said. The variation in the final cost of the bulbs is owing to the difference in taxes across states, it said (www.business-standard.com)

GERC approves levying RC of 45 paise per unit for past recovery

April 4, 2016. Torrent Power Ltd (TPL) said the Gujarat Electricity Regulatory Commission (GERC) has approved imposition of regulatory charge (RC) at 45 paise per unit in a bid to recover companys past dues of ₹ 470.5 crore. GERC on March 31, 2016, had issued tariff orders for Ahmedabad Generation, Ahmedabad Distribution and Surat Distribution of Torrent Power Ltd for truing-up of its financials for 2015-16 fiscal and determination of tariff for 2016-17 fiscal, it said. Recovery of RC has to be stopped once the said gaps are recovered in full during the year, it said. While allowing such RC, GERC has endeavoured to reduce the electricity bill of consumers by 18 paise per unit at ₹ 1.35 a unit compared with the present FPPPA of ₹ 1.98 a unit in view of the recent trend in reduction in fuel price, it said. (indiatoday.intoday.in)

Govt does its math to fast-track rural electrification

April 3, 2016. The government is exploring ways to fast-track rural electrification in Odisha, Bihar, Arunachal Pradesh, Jharkhand and Assam, which are home to most un-electrified villages. The matter came up for discussion at a recent meeting with Prime Minister Narendra Modi. The power ministry will continue to monitor power supply to the villages for 3-4 years, post electrification. Modi had earlier spoken about the process of rural electrification doing "exceedingly well". A total of 1,654 villages were electrified during April-August 2015 and 5,358 have been added to this list during August 15

last year to March 27 this year. The progress is also being monitored through Gram Vidyut Abhiyanta (GVA). The Centre has set a target of electrifying 18,452 un-electrified villages by May 1, 2018. (economictimes.indiatimes.com)

Uttarakhand joins UDAY scheme aiming to gain power surplus worth ₹ 9.6 bn

April 2, 2016. The central government, state of Uttarakhand and the Uttarakhand Power Corp Ltd (UPCL) the power distribution activity of Uttarakhand signed Memorandum of Understanding (MoU) under Ujwal DISCOM Assurance Yojana (UDAY) scheme. The hill state is under Presidential rule since March 27. An overall net benefit of approximately ₹ 962 crore would accrue to the State by opting to participate in UDAY, reduction in Aggregate Technical and Commercial (AT&C) and transmission losses, interventions in energy efficiency, etc. during the period of turnaround, the power ministry said. Aggregate Technical and Commercial losses (AT&C losses) is the sum total of technical loss, commercial losses and shortage due to non-realization of total billed amount and can be calculated by this formula- Total Energy Input LESS Energy Realized/ Total Energy Input}*100. The scheme aims to imply several measures to reduce power loss in the hill state with total 13 districts such as compulsory distribution transformer metering, consumer indexing, upgrade and change of transformers, meters and much more. Implementation of these measures aims to bring down the AT&C losses and transmission losses to 14.50% and 1.78% respectively which in turn will save money of around ₹ 645 crore. (timesofindia.indiatimes.com)

Govt will take policy initiatives to boost hydro power output

April 1, 2016. The government will take major policy initiatives to boost hydro power generation, improve the transmission network and further accelerate the use of energy-efficient LED bulbs, which are now selling in such large volumes that their prices have crashed below ₹ 60, power, coal and renewable energy minister Piyush Goyal said. Consumers have gained enormously from the LED lighting programme as it reduces their monthly electricity bill significantly, while prices of such products have crashed, he said. The minister said his government was determined to resolve legacy issues that have choked India's energy sector. He said the government had already tackled the shortage of coal, which had plagued the thermal power sector. Power secretary P K Pujari, coal secretary Anil Swarup and renewable energy secretary Upendra Tripathy said that the days of fuel scarcity were over and the country was now faced with the problem of plenty. (timesofindia.indiatimes.com)

Delhi govt extends power amnesty scheme till May 31

April 1, 2016. Delhi government once again extended till May 31 its power amnesty scheme, which offers resolution of various types of complaints and grievances pertaining to electricity theft, inflated bills, misuse charges among others. The scheme has been extended on the request of the public and several legislators. Now consumers may be allowed some more time to avail the benefits of the scheme. The 'Bijli Bill Vivad Samadhan Scheme', which was launched by Chief Minister Arvind Kejriwal on August 30 for a period of one month, has already been extended multiple times.

Under the scheme, consumers in Jhuggi Jhopdi or JJ clusters are being charged ₹ 250 per month for the period for which they have not paid the dues and have the option of paying it in instalments over six months. The late payment surcharge has been fully waived for them. All criminal or civil proceedings are also being withdrawn against those who voluntarily disclose having tampered with meters, the government said. Meanwhile, the government has also issued directions to the Delhi Electricity Regulatory Commission (DERC) for amendment of the provisions pertaining to revision of sanctioned load based upon maximum demand readings for domestic consumers. The discoms has been asked not to issue any notice for upward or downward revision of sanctioned load after May 31 of any financial year. (www.ndtv.com)

4 UMPPs may go under the hammer in FY17: Goyal

March 31, 2016. Government expressed hope that it may auction four ultra mega power projects (UMPPs) in the next fiscal. Power and Coal Minister Piyush Goyal in January had the government will auction three UMPPs by March, including Tilaiya and Cheyyur entailing investments of ₹ 80,000 crore. The investment for an UMPP of 4,000 MW has been revised from ₹ 20,000 crore to about ₹ 27,000 crore each recently on basis of rise in the price of coal and land. Power Secretary P K Pujari in March had said the government may not be able to float tenders for three UMPPs entailing an investment of ₹ 90,000 crore by March-end due to some legal glitch. In last year's budget speech, Finance Minister Arun Jaitley had proposed to set up five new UMPPs of 4,000 MW each in the plug-and-play mode. (timesofindia.indiatimes.com)

TPDDL launches hindi version of website

March 30, 2016. Tata Power Delhi Distribution Ltd (TPDDL) has launched the Hindi version of its website in a bid to widen and strengthen relationship with the consumers. With the greater part of Tata Power Delhi Distributions customer base using Hindi as the primary language, owning a Hindi website increases the reach, making the utility more accessible. The Bi-lingual website (Hindi and English) is also easily accessible via smartphones, TPDDL said. The initiative likewise advances Digitization of services in India and contribute towards Digital India Vision, TPDDL said. (indiatoday.intoday.in)

Adani coal project not on agenda of Australia visit: Finance Minister

March 30, 2016. Finance Minister Arun Jaitley dismissed reports that he would push for funds for Adani's 16.5 billion dollars coal mine project during his meetings with Australian leaders, saying this was not on his agenda. Asked if he would discuss the issue of Adani's Carmichael coal mine project in Queensland with the Australian leaders he was meeting during his visit, Jaitley said, "not really". The reports said that Adani's project would figure in talks when the Finance Minister would meet Peter Costello, the head of Australia's sovereign wealth fund called Future Fund. Adani's plan to build one of the world's largest coal mines in Australia has been hampered time and again. A federal court in August last year had revoked the original approval due to environmental concerns. In October last year, the project got a new lease of life after the Australian government gave its re-approval. Queensland state's Department of Environment and Heritage Protection (EHP) issued a final environmental authority for Adani's Carmichael Mine project but with about 140 conditions. The project is located near the fragile Great Barrier Reef. (www.business-standard.com)

Coal India arm to hire private agencies for detailed exploration of mines

March 30, 2016. A Coal India arm Central Mine Planning & Design Institute (CMPDI) plans to involve private agencies in detailed coal exploration of mines as the mining major seeks to double its production by 2020. CMPDI is organising a pre-Notice Inviting Tender meeting for the outsourcing of detailed exploration of future mines. Coal India accounts for over 80% of the domestic coal production. Government has set a target of 1.5 billion tonnes coal output by 2020, of which 1 billion tonnes would be from the state-run miner. The output of Coal India is expected at 535-540 million tonnes this fiscal against the target of 550 million tonnes due to slump in demand. (www.dnaindia.com)

[INTERNATIONAL: OIL & GAS]

Upstream.....

Shell pulls out of Arctic-focused exploration oil licensing round in Norway

April 4, 2016. Oil major Royal Dutch Shell has pulled its application from Norway's Arctic-focused oil licensing round, the firm said, in a blow to the Nordic country's ambitions to explore for oil and gas in its northern offshore areas. In December the Norwegian oil ministry said Shell was among the companies that had applied for drilling permissions in the so-called 23rd round, a licensing round set to move the search for hydrocarbons closer to the country's border with Russia. The firm had hoped that it could begin drilling in 2017 if it won licenses in the 23rd licensing round. The Norwegian oil and energy minister said Shell's decision had no implication for the conduct of the licensing round. The awards would still be announced before July. (www.reuters.com)

Eni to see 'negligible' impact from halt of Italian oil field

April 4, 2016. The shutdown of Europe's largest onshore oil field over alleged illicit waste disposal at a nearby treatment plant will probably only have a "negligible" effect on Eni SpA's earnings because Italy often allows operations to resume during probes, analysts said. Production at Val d'Agri was halted after Italian authorities seized part of a nearby oil-treatment facility amid a waste-disposal investigation. Eni has asked prosecutors to restart production after suspending staff as part of the probe. The company declined to comment on the impact of the halt at the field in which Royal Dutch Shell plc also holds a stake. The Val d'Agri field produces about 75,000 barrels of oil a day and accounted for about 40 percent of Eni's total Italian oil and gas production in 2014, according to the company. Eni, operator of the Val d'Agri field, had a daily global output of 1.6 million barrels in 2014. (www.bloomberg.com)

Russia says oil output increase will not hamper production deal

April 2, 2016. An increase in Russian oil production toward a record high in March will not be an obstacle to an expected agreement on a production freeze, Russian Energy Minister Alexander Novak said. Novak said that it was important that Russia's average production over a prolonged period would not exceed its output level in January, as previously agreed. Russia's oil production rose 0.3 percent to 10.91 million barrels per day in March, its highest level in nearly 30 years, raising questions over Moscow's commitment to freeze output ahead of the producers' meeting in Doha later in April. (www.reuters.com)

Saudi Arabia and Kuwait will resume production at their joint oil field

April 1, 2016. Saudi Arabia and Kuwait have agreed to resume crude oil production at their jointly operated Khafji field in the Neutral Zone. The field, which was producing 280,000 to 300,000 barrels per day of oil, has been shut since October 2014 for environmental reasons. Another joint oil field, Wafra, has also been shut down since May 2015, due to operating difficulties. (www.enerdata.net)

BP, CNPC sign first PSC for shale gas exploration in China

March 31, 2016. BP and China National Petroleum Corp (CNPC) sign the first production sharing contract for shale gas exploration, development and production in the Neijiang-Dazu block in the Sichuan Basin, China. BP plc and CNPC have signed the first production sharing contract (PSC) for shale gas exploration, development and production in the Neijiang-Dazu block in the Sichuan Basin, China. The contract will cover an area of approximately 1,500 square kilometers and positions CNPC as the operator of the project. This PSC is the first achievement from BP and CNPC's framework agreement on strategic cooperation that was signed last October during the President of The People's Republic of China, Xi Jinping's, visit to the UK. BP's latest Energy Outlook expects that by 2035 shale gas will account for a quarter of the total gas produced globally and China will become the world's largest contributor to growth in shale gas production. (www.rigzone.com)

Songa Enabler set to commence 8 year Statoil drilling contract

March 31, 2016. Songa Offshore announced that the Songa Enabler will "shortly" be sent to Norway to start an eight year drilling contract with Statoil, commencing on the Snohvit field. Currently in South Korea, the vessel will arrive in Norway with all third party equipment installed and ready for final acceptance testing. The commencement of drilling operations is expected to take place in third quarter 2016. The Songa Enabler is the last rig in a series of four Category-D rigs specifically built for, and contracted to, Statoil. (www.rigzone.com)

Mari Petroleum makes oil, gas discovery in Pakistan's Karak Block

March 31, 2016. Hungary's MOL Plc. reported a new hydrocarbon discovery in the Karak Block, Pakistan following the announcement made by the operator, Mari Petroleum. The Halini-Deep-1 discovery marks the third consequent discovery in the block following two previous successes. The Halini-Deep-1 well was drilled to a depth of 19,357 feet. The completion integrity test has been conducted with flow rates of 1,425 barrels of oil per day (bopd) oil and 1.18 million standard cubic feet per day gas (197 barrels of oil equivalent per day). MOL has a well-established track record of over 17 years in Pakistan and holds equity stakes in five blocks in the country. The current discovery is the 11th one achieved in three different blocks. The Karak block is operated by Mari Petroleum Company Ltd (MPCL) with a 60 percent working interest while MOL Pakistan Oil & Gas Co. B.V has 40 percent in the block. (www.rigzone.com)

US January crude output falls 56k bpd to 9.1 mn bpd: EIA

March 31, 2016. U.S. crude oil production fell for the fourth consecutive month in January, but rising output from shale formations in Texas highlighted U.S. producers' ability to keep output near record levels in the face of low prices. Production in January fell by 56,000 barrels per day (bpd) to 9.179 million bpd, according to data from the U.S. Energy Information Administration (EIA). The level was the lowest since October 2014, according to the EIA's data. Gulf of Mexico output fell 18,000 bpd while North Dakota's oil output was down 32,000 bpd from December levels. At the same time, production in Texas rose 25,000 bpd. Production for December was revised downward by an additional 27,000 bpd to 9.235 million bpd, according to the EIA. (www.reuters.com)

Sinopec plans to double its gas production by 2020

March 31, 2016. China Petroleum (Sinopec) plans to nearly double its annual gas production by 2020, to 40 billion cubic meters (bcm), from the current 20.8 bcm (2015). The company bets on new gas discoveries to reach a production level of 29.5 bcm of conventional gas, 10 bcm of shale gas and 500 mcm of coal-bed methane by 2020. In 2015, Sinopec made several significant gas discoveries in Sichuan and in the Erdos basin in Inner Mongolia. (www.enerdata.net)

UK to dominate North Sea crude and gas projects by 2025

March 31, 2016. UK will dominate the new crude and natural gas projects in the North Sea region by 2025, according to a report from Globaldata. Out of 36 projects expected to be operational in the region, 25 are in the UK, followed by nine in Norway and two in Denmark, according to the report. All the planned projects are estimated to produce 819,000 barrels of oil per day and 1.1 billion cubic feet of gas per day by 2025, requiring capital expenditure (capex) of \$86.5 bn. Of this, about \$43.4 bn is likely to be invested between 2016 and 2025. Norway, which is planning to earmark \$12 bn capex for Johan Sverdrup project alone, is expected to lead the region with overall capex of \$27.8 bn. (explorationanddevelopment.energy-business-review.com)

Downstream.....

Petrobangla, Excelerate sign agreement to build Bangladesh's first FSRU

April 4, 2016. Bangladesh Oil, Gas & Mineral Corp (Petrobangla) and Excelerate Energy L.P. recently signed an agreement to build a floating storage and regasification unit (FSRU) in the South Asian country. The FSRU, the country's first receiving terminal for liquefied natural gas (LNG), will be located on the island of Moheshkhali in the Bay of Bengal offshore Bangladesh, with the new facility intended to meet rising domestic energy consumption, particularly in Chittagong, where there has been an acute gas shortage for some time now. Bangladesh's State Minister for Power, Energy and Mineral Resources Nasrul Hamid said the agreement for the FSRU is the first step which the government is taking to tackle the gas crisis. Bangladesh plans to commence LNG imports in early 2017. The government has plans to add another three more LNG receiving terminals in the country as part of its efforts since 2010 to turn to LNG imports in dealing with the energy deficit. (www.rigzone.com)

Essar Oil turns around loss-making Stanlow refinery

April 3, 2016. Nearly five-years after acquiring the strategic Stanlow refinery from Shell, Essar Oil UK has turned around the loss making unit with a record net profit of \$187 million in 2015-16 as it optimised processes, diversified crude basket and invested in margin improvement programmes. Stanlow produces over 16 percent of UKs transport fuels, serving north-west part of UK. Essar, the only Indian firm to own and operate a refinery in Europe, has also entered into auto fuel retailing in UK, opening seven petrol stations and plans to raise the number to 400 in three years to capture 10 percent of market.

Stanlow, which operated at a third of its stated capacity of 210,000 barrels per day in July 2011 when Essar bought the unit from Shell for \$350 million, clocked near 200,000 bpd crude run in FY16. Also, the refinery is processing 25 new crude oils that give price and yield advantage instead of Shells policy of relying only on North Sea grades that did not offer better economics all the time. (indiatoday.intoday.in)

Vitol, Seplat among nine bidders for new Nigerian oil refineries

April 1, 2016. Vitol SA and Seplat Petroleum Dev. Co. are among nine companies that submitted bids to construct new oil refineries in Nigeria as Africa's top crude producer seeks to boost output of refined fuel and end its dependence on imports. The successful companies will build near existing state-owned plants and add at least 250,000 barrels per day of refining capacity to the current 445,000 barrels, the Nigerian National Petroleum Corp (NNPC) said.

The government's refineries are located in the northern city of Kaduna and the southern cities of Warri and Port Harcourt. The new, smaller refineries will become operational within 12 to 24 months, while the existing plants will be rehabilitated to operate at a minimum 70 percent of their capacity within the next six to eight months, according to the NNPC. (www.bloomberg.com)

Mexico's Pemex sees crude refining up more than 6 percent in 2016

March 31, 2016. Mexican state-run oil company Pemex expects to process 6.3 percent more crude oil this year, as it resolves problems at refineries that forced crude runs to a record low in 2015. The company, which operates six domestic refineries, will refine 1.134 million barrels per day (bpd) this year, compared with 1.066 million bpd in 2015. Last year, Pemex processed its lowest amount of crude in at least a quarter century, as plant outages and other inefficiencies battered margins. If Pemex refines more crude domestically, it would lessen Mexico's need for gasoline imports, which have grown by nearly a fifth over the past three years. Mexico is currently forced to import more than half of its gasoline demand. The company said this year's uptick was due to fixes at its hydro-desulfurization and gasoline reformer units as well as the "stabilization" of its Cadereyta refinery following adjustments to its low-sulfur diesel units. In 2016, the company expects to achieve a utilization rate of 72 percent, up from 68 percent last year. In comparison, refiners in the United States have a utilization rate of 87 percent, while in Brazil the rate is 81 percent and in Colombia 79 percent, according to data from Houston-based consultancy Wood Mackenzie. Pemex has a total refining capacity of 1.576 million bpd. Pemex's Tula refinery, the company's second biggest, will see crude runs rise about 10 percent to average about 261,000 bpd this year. (www.reuters.com)

Exxon, California in preliminary agreement on Torrance refinery

March 31, 2016. Exxon Mobil Corp and California's South Coast Air Quality Management District have reached a preliminary agreement to allow the restart of a crippled gasoline unit at its Torrance refinery, the regulator said. Exxon is contractually required to have the fluid catalytic cracking unit fully operational before it can complete the sale of the refinery to PBF Energy Inc. PBF, one of the largest independent U.S. oil refiners, agreed to buy the 149,000 barrel-per-day Torrance plant last September. A February 2015 explosion destroyed the facility's pollution-controlling electrostatic precipitator and damaged the gasoline unit, both of which have remained shut. Restart activities are expected to last 35 days, including a 15-day period during which Exxon must show the unit is fully operational. (www.reuters.com)

Transportation / Trade.....

PGNiG mulls selling gas outside Poland

April 5, 2016. Poland's biggest gas company PGNiG plans to sell natural gas on foreign markets and wants to renegotiate its long-term supply contracts to reduce import costs, it said. Poland consumes around 16 billion cubic meters of gas annually. Most of it comes from Russia, as state-run PGNiG depends on a long-term gas supply contract with Gazprom, the so called Yamal contract, binding until 2022. PGNiG is struggling to secure alternative supplies after that date. Poland's first liquefied gas terminal (LNG), at the Baltic Sea, will take the first commercial shipments in July and the country is also planning a pipeline to Norway. The company said that due to the sharp fall in oil and gas prices on global markets it will try to renegotiate the price terms in its long-term gas supply contracts - the one with Gazprom and another with Qatargas. To balance its gas portfolio amid a liberalizing Polish gas market PGNiG said it plans to place some gas on the international markets. PGNiG and Gazprom already started renegotiating their contract in 2014. The Polish company buys up to 10.2 billion cubic meters (bcm) of gas annually from the Russian firm. The deal with Qatargas assumes gas deliveries of 1.5 bcm annually via the terminal for 20 years starting from 2014 when the facility was initially set to open. (www.reuters.com)

Shale gas hits US railroads and diesel demand

April 4, 2016. Cheap natural gas has slashed coal traffic across the U.S. rail network and in turn hit demand for diesel, demonstrating the interlocking relationship between the country's energy and transport systems. U.S. rail freight declined more than 6 percent in the first 12 weeks of 2016 compared with a year earlier, according to the Association of American Railroads. Coal loadings are down because power plants have switched to burning inexpensive natural gas, which has left them with record stockpiles of unburned coal and cutting deliveries. That in turn is reducing the number of railcars moving across the tracks and the railroad companies' purchases of diesel, leaving diesel stocks at a seasonal record. So in a roundabout way, the shale (gas) revolution has battered the U.S. coal industry and in turn hurt the railroads, and in the process is worsening the imbalances in the diesel market. The volume of natural gas burned in U.S. power plants surged by almost 18 percent to a record 10 trillion cubic feet. (www.reuters.com)

Norway may boost gas output as Russia, US LNG supply increases

April 5, 2016. Norway will allow increased production from its biggest natural gas field as Europe's second-largest supplier of the fuel prepares for increased competition with Russia and the U.S. The production permit for Troll was increased 10 percent for the gas year starting October 1, according to field operator Statoil ASA. Norway installed two new compressors at the North Sea field, ending technical issues that previously limited capacity and helping supply record volumes to Europe. The higher limit may help Norway to catch up with Russia, the top European supplier which said it would this year exceed its 2013 export record. The two nations can send fuel to Europe at a lower cost than the U.S., which in February began shipments by tanker from the Gulf of Mexico coast. With European gas prices near their lowest since 2009 moving closer to those in the U.S., American shale gas has favored markets in Brazil and India. Troll's production permit has been increased to 33 billion cubic meters (1.2 trillion cubic feet) for the 2016 gas year, or almost as much as France's annual consumption. European gas prices are pressured after a mild winter left more gas in storage than last year and as flows from Norway and Russia by pipelines and from Qatar by tanker show no signs of respite. Gazprom PJSC, Russia's pipeline gas export monopoly, said shipments to Europe and Turkey, its main market by revenue, rose 29 percent to 44.4 billion cubic meters in the first quarter, with the biggest growth in supplies to the U.K. and the Netherlands. (www.bloomberg.com)

Abu Dhabi's oil chief sees crude market balancing by end of 2017

April 4, 2016. Oil markets will probably balance by the end of next year, with prices rising in the medium term, according to Sultan Al Jaber, the new head of Abu Dhabi National Oil Co. Prices, which have swung between highs of about \$42 a barrel and lows of about \$27 this year, will continue to be volatile in the short term, Al Jaber said. Abu Dhabi, the capital of the United Arab Emirates (UAE), holds about 6 percent of the world's oil reserves. The UAE, a member of the Organization of Petroleum Exporting Countries (OPEC), is among at least a dozen states that have said they'll meet in Doha, Qatar, on April 17 to discuss a potential freeze in oil output to stabilize prices. The UAE pumped about 2.89 million barrels a day last month. Abu Dhabi had been seeking to boost capacity to 3.5 million barrels daily by the end of 2017. (www.bloomberg.com)

US Judge approves BP settlement for 2010 Gulf of Mexico oil spill

April 4, 2016. U.S. Judge Carl Barbier granted final approval to BP Plc's civil settlement over its 2010 Gulf of Mexico oil spill after it reached a deal in July 2015 to pay up to \$18.7 billion in penalties to the U.S. government and five states. The company at the time said its total pre-tax charges from the spill set aside for criminal and civil penalties and cleanup costs were around \$53.8 billion. Under the terms of the original agreement with the U.S. Department of Justice and the Gulf Coast states, BP will pay at least \$12.8 billion for Clean Water Act fines and natural resource damages, plus \$4.9 billion to states. The payouts will be staggered over as many as 18 years. (www.reuters.com)

Iran Oil Minister says will keep raising production

April 4, 2016. Iran will continue increasing its oil production and exports until it reaches the market position it enjoyed before the imposition of sanctions, Oil Minister Bijan Zanganeh said. Saudi Arabia's Deputy Crown Prince Mohammed bin Salman as saying Riyadh would agree to freeze crude oil production levels only if Iran and other major producers did so. A global glut has pulled down oil prices by as much as 70 percent since 2014. Organization of the Petroleum Exporting Countries (OPEC) secondary sources put Iran's current output at 2.93 million barrels per day (bpd). It is working to regain market share, particularly in Europe, after the lifting of international sanctions in January. The sanctions had cut crude exports from a peak of 2.5 million bpd before 2011 to just over 1 million bpd in recent years. (www.reuters.com)

ADB considers \$450 mn loan for Shah Deniz II gas project

March 31, 2016. The Asian Development Bank (ADB) is considering offering a US\$450 mn loan to help Azerbaijan develop the Shah Deniz II gas project. Shah Deniz is the largest gas field in Azerbaijan, with an estimated 1,200 billion cubic meters (bcm) of gas reserves. Gas production started in 2006 at an average production capacity of 10 bcm per year. (www.enerdata.net)

Bahrain's Nogaholding borrows \$570 mn for oil, LNG projects

March 30, 2016. Bahrain's oil investment company Nogaholding is taking a \$570 million Islamic loan to pay for expansion projects, including improvements to the island nation's only refinery and construction of a liquefied natural gas import terminal. The company arranged the Murabaha facility with 10 banks including Bank of Tokyo-Mitsubishi UFJ, BNP Paribas SA and HSBC Holdings Plc, it said. The investment arm of Bahrain's National Oil & Gas Authority wants the money to help finance planned investments of more than \$7 billion. Bahrain, the smallest oil producer in the Persian Gulf, pumps most of its crude from a field it shares with Saudi Arabia. The country is seeking to expand output capacity at its wholly owned Bahrain field, site of the Gulf's first oil discovery in 1932, to 100,000 barrels a day by the end of the decade. The Bahrain field produced 44,000 barrels a day in 2014. Bahrain exports refined products such as jet fuel and diesel from its 260,000 barrel-a-day refinery. Bahrain Petroleum Co. plans to boost the plant's capacity to 360,000 barrels a day and produce higher-quality fuels, Abdul Hussain Mirza, the nation's energy minister, said. Lower oil prices were reducing construction costs, making it a good time to expand the facility, Mirza said. Bahrain also plans to build an import terminal for LNG, which it needs as fuel for power plants and industries, and upgrade its capacity to process natural gas. (www.bloomberg.com)

[INTERNATIONAL: POWER]

Generation.....

Construction of 1.2 GW Hai Duong coal-fired power plant starts

April 1, 2016. Malaysian group Jaks Resources Bhd has officially started the construction of the Hai Duong 1,200 MW coal-fired power project in the Hai Duong province of Vietnam. The project, consisting of two 600 MW units, is developed in partnership with China Power Engineering Consulting Group under a build-operate-transfer (BOT) model. The project, worth US\$1.87 bn, is expected to be commissioned in 2020, as the BOT contract includes a fine if the project is not completed within four years. The company will sell power to Electricity of Vietnam under a long-term power purchase agreement and will transfer the project to the Vietnamese government after 25 years. (www.enerdata.net)

China Shenhua considers taking stakes in nuclear projects

March 31, 2016. China's largest coal producer Shenhua is in talks with major Chinese nuclear project developers, namely China National Nuclear Corporation (CNNC) and China General Nuclear Power Corp (CGNPC), to take stakes in domestic nuclear power projects. Shenhua is seeking to diversify its activities, as China is progressively shifting from coal to gas, nuclear and renewable energies. (www.enerdata.net)

Alliant wins approval for \$700 mn power plant near Beloit

March 31, 2016. Alliant Energy Corp has won preliminary approval from a regulatory panel to build a \$700 million natural gas-fired power plant near Beloit. The Madison-based utility says the new plant will be located next to its existing gas-fired Riverside power plant, doubling the capacity of the complex.

The new plant can generate enough electricity to power 535,000 homes. Alliant says it's too soon to tell how it will affect the average ratepayer's bill. Construction is expected to begin this fall, and the 700 MW plant could begin operating in 2020. It will be the first new fossil fuel power plant built in Wisconsin in nearly a decade, and is expected to create 1,000 construction jobs. (www.startribune.com)

Kurdish energy firm nets \$105 mn for power plant

March 31, 2016. Qaiwan Group has secured \$105 million of loan financing to activate a power plant in Bazian, Iraq – thought to be the biggest international bank loans provided to a Kurdish company operating in Iraqi Kurdistan in recent years. The energy firm said it had secured an eight-year, \$75 million loan through Deutsche Bank and Bankmed – a Dubai-based branch of Lebanese bank Bankmed SAL. Qaiwan group secured a five-year, \$30 million commercial loan from GE (General Electric) Capital, it said. The two loans will refinance part of the company's 442 MW Bazian Power Plant, capable of powering 500,000 homes in Iraqi Kurdistan, it claimed. Qaiwan entered into a 15-year agreement with the Kurdistan

regional government's Ministry of Electricity in 2013 to finance, build, own, operate and maintain a power plant in the Sulaymaniyah area of Iraqi Kurdistan. Under the deal, Qaiwan Group pledged to build a natural gas-fired power plant in Bazian, which is 25 kilometres away from Sulaymaniyah. Construction began in the second half of 2014 and is nearing completion, but the financing deal enables the plant to become operational for the first time. (www.arabianbusiness.com)

Bangladesh-China JV to construct \$1.5 bn power plant in southern Bangladesh

March 30, 2016. Bangladesh-China Power Company Ltd (BCPCL) will invest \$1.56 billion in a coal-fired plant near a proposed sea port south of Dhaka to produce 1,320 MW of electricity by 2019, the head of the joint venture (JV) said. Two units with a capacity of 660 MW each will be set up at Dhankhali in Patuakhali district, 319 kilometers south of Dhaka and close to the proposed Payra sea port, BCPCL said. BCPCL is a 50:50 JV between China National Machinery Import and Export Corp and Bangladesh's North-West Power Generation Co Ltd. BCPCL will fund 80 percent of the investment by a loan from Chinese banks and raw material coal will be imported from Indonesia, China and Australia. The new project will require 12,000 tonnes of coal daily. Bangladesh needs to produce 24,000 MW daily by 2021 to meet its demand for power that is growing 10 percent annually. At present, it produces 8,500 MW a day and has the capacity to produce 11,000 MW per day. The first unit of BCPCL's planned project will come online in April 2019 and the other one six months later. (in.reuters.com)

Transmission / Distribution / Trade...

ZESCO commences upgrade of Transmission lines in preparation for power from Mamba

April 4, 2016. The World Bank and European Investment Bank financed US\$100 million upgrade of the Zambia Electricity Supply Corp (ZESCO) transmission line from Kafue to Livingstone is expected to commence. ZESCO said the project would see the power transmission line upgraded from the current 220 to 330 kilovolts to enable it carry about 665 MW of power, which would be generated from the thermal plant in Maamba, Southern Province.

ZESCO said the project would be completed in 21 days and assured that by June, there would be stable power supply and reduced power shortages in various parts of Zambia. ZESCO said that the current 220 kilovolt transmission line would not be able to accommodate the power to be generated from the Maamba thermal plant until it had been upgraded. ZESCO said the other idea behind the project was to provide reliability of power supply and quality services to customers. (www.lusakatimes.com)

Japan opens its electricity market and ends power utilities' monopoly

April 1, 2016. Japan opened its retail electricity market on 1 April 2016, ending the monopoly of the ten regional electricity companies. More than 260 companies have been allowed to sell electricity on the US\$70 bn retail market, including city gas operators such as Tokyo Gas or new players such as trading group Marubeni or telecom group Softbank. The Japanese government expects that this new competition will improve innovation and efficiency and cut prices, that are among the highest in the world. Tokyo Electric Power Company (TEPCO) has already anticipated competition (six regional utilities, Tokyo Gas and JX Holdings are targeting the Tokyo area and its 29 million customers) and lowered prices for some customers. Kansai Electric, the second largest utility, has excluded to cut prices as its plans to reopen two reactors at its Takahama nuclear plant were scrapped. Regional utilities will still control electricity grids and will be able to charge high fees for newcomers, as the unbundling of transmission and generation is not expected before 2020. (www.enerdata.net)

EIB lends £500 mn for Caithness Moray 1.2 GW transmission line

March 31, 2016. The European Investment Bank (EIB) has approved a £500m (€635 mn) financial support for the development of a new subsea electricity transmission line to be built in the north of Scotland. The Caithness Moray transmission project, developed by Scottish Hydro Electricity Transmission aims to connect 1,200 MW of new renewable power capacity on either side of the Moray Firth. The commissioning of the project is expected in 2018. The £500m loan will support nearly £1.2 bn (€1.5 bn) of overall investment in the electricity transmission network in the north of Scotland by Scottish Hydro Electric Transmission. In December 2014, the British energy regulator Ofgem approved a £1.1 bn (€1.4 bn) funding for the project. (www.enerdata.net)

EU sees need for billions of euros in nuclear-power investment

April 4, 2016. The European Union (EU) will need to spend between € 650 billion (\$741 billion) and € 760 billion by 2050 on its aging atomic power plants, according to an EU report. Building new plants is set to cost between € 350 billion and € 450 billion, constituting the biggest part of the future investment, according to the EU. By the middle of the century, 90 percent of the existing nuclear power generation capacity will need to be replaced, the report found. Atomic capacity in Europe will drop up to 2025 as some governments, including Germany and France, seek to phase out or reduce its share in the energy mix, the European Commission said. The trend will reverse by 2030 as some reactors get life extensions and new units are connected to the grid, it projected.

By 2050, nuclear capacity is to stabilize at between 95 GW and 105 GW, generating around 20 percent of EU power. Extending the lives of existing reactors, whose average age is close to 30 years, will require investment of € 45 billion to € 50 billion by mid-century, the report showed. National authorities assume that granting long-term operation programs to such reactors will give them additional 10 to 20 years on average, the commission said. The report showed a funding gap in decommissioning, or the final step of a nuclear reactor's lifecycle. Out of the 89 reactors than have already been permanently shut down in Europe as of October, only three -- all in Germany -- have been completely decommissioned, the report showed. (www.bloomberg.com)

Queensland gives nod for Adani's Carmichael coal mine

April 4, 2016. The Queensland government in Australia has granted leases for Indian energy firm Adani Group to proceed with its Carmichael coal mine, even as the project is being criticized for its environmental impact. Queensland's mining minister Dr Anthony Lynham approved the grant of three individual mining leases about 160 km north-west of Clermont. The government expects the mining leases for the \$21.7 bn Carmichael coal mine and rail project in the State's Galilee Basin to create thousands of jobs. Environmentalists have been questioning the approval for the project saying it could have harmful impact on the Great Barrier Reef. The three leases for mining in Queensland's Galilee Basin are projected to produce 11 billion tonnes of thermal coal. (mineralsandmaterials.energy-business-review.com)

Coal price hopes fade amid reality of slowing Asia demand

April 4, 2016. Coal's bright start to the year in Asia is fading amid the gloom of weak demand across the region's top importers and still too much supply from top producers. Coal was most likely the beneficiary of better sentiment towards commodities in general that saw strong rallies in iron ore and crude oil in recent weeks, which have also petered out. But while there may be some positive fundamentals in other commodities markets, with tentative signs of a recovery in China's vast manufacturing sector, there is no silver lining in sight for coal.

China aims to keep the rise in its total energy use to just 0.9 percent in 2016, the same rate as 2015, the National Energy Administration said. For coal, the important part is that the plan also calls for coal's share of that total to be cut to 63 percent from last year's 64 percent. China plans to shut 60 million tonnes of domestic coal output this year, and 500 million tonnes in total over the next five years. (www.reuters.com)

Virginia regulators approve new Dominion power plant

March 30, 2016. Dominion Virginia Power won state regulators' go-ahead for a \$1.3 billion, natural-gas-fired plant in the state's Southside region. The State Corporation Commission (SCC) announced its approval of the 1,588 MW Greenville Power Station. Dominion expects to open the plant in 2019.

To pay for its construction, the utility has asked the SCC for a rider that it estimated would increase a typical residential customer's monthly bill by 75 cents. Still, Dominion said the facility will save customers \$2.1 billion over the plant's lifetime by allowing it to avoid purchasing electricity on the open market that would have been even more expensive. Environmental groups decried the plant's approval. (pilotonline.com)

[RENEWABLE ENERGY / CLIMATE CHANGE TRENDS]

National.....

Govt offices to turn solar power generating centres

April 5, 2016. The huge roofs of state and central government offices in Belagavi will be transformed into electricity producing centres. Under the Integrated Power Development Scheme (IPDS) envisaged by the Centre in association with the state government, the Hubli Electricity Supply Company (Hescom) has identified 10 such offices where solar panels will be installed. The ₹ 38.66 crore project aims at producing 100 KW power. The offices of deputy commissioner, court complex, Belagavi Urban Development Authority, superintendent of police, Belagavi City Corporation, Central Excise and Customs and State Bank of India's main branch in Khanapur Road will have rooftop solar energy producing units. Apart from all these places, Hescom will also install solar panels in its offices. The Union energy ministry plans to utilize solar energy to meet the energy requirements of the nation. Under the solar energy policy, the Centre is providing 75% of grant for the installation of solar power generating units. Special category states will get 90% grant for solar energy generation plants. If the project is completed and commenced well before the stipulated time, the Centre will give an additional 15% grant. (timesofindia.indiatimes.com)

Tariff-based bidding to award green corridor for solar parks

April 5, 2016. Projects under the ambitious transmission plan to connect the upcoming 33 solar power parks across India are likely to be awarded through tariff-based competitive bidding (TBCB). The green corridor project — a dedicated transmission network for renewable energy — was envisaged by state-owned Power Grid Corp of India Ltd (PGCIL) at an estimated cost of ₹ 40,000 crore in 2011. With the new government revising the targets five times, a secondary plan for solar parks was also drafted along with revised transmission plan. According to industry estimates, the cost of connecting 27 solar parks is close to ₹ 55,000 crore. Last year, seven more parks were added, taking the cumulative capacity to 19,900 MW, according to government documents. To expedite the transmission development for the upcoming solar parks, the projects would now be awarded to private players as well through transparent bidding process. The move is in line with the government's plan to open up the power transmission sector for private investment. Sterlite Grid, Adani Power, Essel Infra, and Tata Power etc might participate in the bidding. These companies had won several power transmission projects last year through TBCB. The Association of Power Producers had earlier batted for opening mega projects such as green corridors for private investment to bring down power rates. The 33 solar projects would come up in 21 states including Rajasthan, Madhya Pradesh, Gujarat, Telangana, Andhra Pradesh, Karnataka, Uttar Pradesh, Jammu & Kashmir, Punjab, Tamil Nadu and Odisha, among others. (www.business-standard.com)

Adopt sustainable mining practices: President

April 5, 2016. The exploitation of natural resources should be undertaken keeping in mind the threat of natural and manmade disasters, President Pranab Mukherjee said as he underlined that mankind's sustenance depends on the adoption of environmentally sustainable mining practices. Natural resources have to be explored, extracted, refined and processed for use in national building, Mukherjee said. Mukherjee said hazard profiles have changed dramatically in recent years due to transformation in both our perception of geological hazards with long recurrence times as well as the actual changes driven by climate change. (www.business-standard.com)

Span Pumps forays into rooftop solar power generation

April 5, 2016. Span Pumps Pvt Ltd, a manufacturer of manual and solar operated water pumps, has made a foray into the rooftop solar power generation segment. The new venture will function under a separate entity called 'Kalpa Power', Rounak Muthiyar, Director, Span Pumps, said. The regions targeted for the new business are Maharashtra and NCR as these have a good potential for rooftop solar power generation for commercial and industrial use as the power cost is high and the supply is inconsistent, he said. Kalpa Power will provide complete design optimisation and implementation support for the ground mounted and rooftop solar power generation. The parent company has made an initial investment of about ₹ 6.5 crore in Kalpa Power which currently has a confirmed order book of over 1MW capacity and is targeting 8

MW in fiscal 17. The turnover of Span during FY 2016 stood at ₹ 75 crore, including ₹ 10 crore from exports. (www.thehindubusinessline.com)

Goyal slams West for 'double standards' on climate change

April 5, 2016. Attacking the Western world for its 'double standards' in tackling climate change, power, coal and renewable energy minister Piyush Goyal said there is a "gap" in what the "West" says and what it does on climate change. Most of the western world survived on coal. The coal consumption in the United States (US), in per capita terms, is as much as India consumes in 2016. Today, in absolute numbers also, with one-fourth of population of India, the US consumes over 2-2.5 times more coal than the world's largest democracy, he said. Goyal said the US keeps talking about the inconvenient truth, while at the same time India was doing convenient action. Today, there are 16 state-run programmes in the US where the domestic industry is protected in solar equipment procurement and this "double standard" has to stop someday, he said. (www.financialexpress.com)

IREDA, TCCL ink pact on financing RE projects

April 4, 2016. Indian Renewable Energy Development Agency (IREDA) signed a pact with Tata Cleantech Capital Ltd (TCCL) to jointly develop an innovative financial mechanism aimed at new projects and customers in the renewable energy (RE) space. Both the organisations are specialist cleantech financing institutions deeply invested in their efforts to promote development of renewable energy in India. Tata Cleantech Capital is excited to partner with IREDA to help achieve India's clean energy target of 175 GW by 2022. (indiatoday.intoday.in)

Haryana makes solar plants mandatory for housing societies, industry

April 3, 2016. Haryana has made solar power plants mandatory for housing societies, industries and other specified categories of buildings. The notification has been issued in this regard to achieve higher trajectory for solar power generation and promote green energy, principal secretary for renewable energy Ankur Gupta said. Under Haryana's solar power policy for 2016, the state government is providing various incentives including industrial status, exemption from change of land use approval and cess, free-wheeling and banking facility, exemption of T&D and cross-subsidy charges. Besides, the government has decided to purchase solar power over and above the solar Renewable Purchase Obligation (RPO), Gupta said. He said 40 investors have signed memorandum of understanding adding to over ₹ 98,000 crore with the aim of adding 8,531.75 MW of solar power, besides setting up of bio CNG, module or cell manufacturing, and research and development units in the state. Describing Haryana as an emerging state in the renewable energy sector, Gupta said that the government was encouraging small investors by reserving 20 percent of the target for projects of 1-2 MW capacity, giving price preference of 2 percent to the plants installed in the state. The government is also promoting rooftop solar power plants to replace diesel gensets in the state, with an aim to reduce pollution and emission of greenhouse gases. In Haryana, a solar power plant can work for about 330 days a year, every kilowatt of which produces about 1,600 units of electricity a year. A typical 1KW solar power plant costs ₹ 55,000-60,000, after availing subsidy. While the payback period is four-five years, the system lasts for more than 25 years. The government is providing 30 percent subsidy, subject to a maximum of ₹ 20,000 per kilowatt peak (kWp), on installation of solar power plants for certain categories of buildings, Gupta said. (economictimes.indiatimes.com)

Suzlon bags wind turbine order for 197 MW

March 31, 2016. Wind turbine generator manufacturer Suzlon Energy Ltd said it has bagged an order of 197.40 MW from a private power utility company. The project will be commissioned in phases with complete execution scheduled by March 2017. Suzlon will install its S97 suite of wind turbine generators with 120m and 90m hub height and rated capacity of 2.1 MW each. (www.newkerala.com)

Modi's plan to clean up world's worst air resisted by Indian power generators

March 31, 2016. India's effort to clean up the world's worst air is facing resistance from power producers who say the government is asking them to spend too much and revamp old plants too quickly. The nation's first steps to limit toxic emissions from coal-fired power plants may cost ₹ 2.5 trillion (\$37 billion) and will take longer than the two-year deadline set by the government, according to the New Delhi-based Association of Power Producers, a lobby group of non-state power generation companies. The clean-up standards were published days after Prime Minister (PM) Narendra Modi

returned from the December climate conference in Paris amid uproar over the worsening air quality in the capital New Delhi. India is home to 11 of the top 20 cities on the planet with the worst air quality, according to data from the World Health Organization. After endorsing the historic climate package in Paris to curb pollution, Modi is under pressure to limit human and environmental costs linked to fossil-fuel consumption in India, where thermal coal accounts for more than 60 percent of electricity generation. India unveiled its first-ever emissions norms for particulate matter, sulfur dioxide and nitrogen oxides from thermal power plants in December. The most stringent of them, which apply to new plants, measure up to those in the EU and China, according to an analysis by the Clean Air Task Force, a Boston-based climate advisory group. The environment ministry also put a cap on water usage at power plants, among the biggest water-guzzlers in India. For particulate matter -- extremely small solid or liquid particles -- India allows a maximum concentration of 30 milligrams per normal cubic meter for plants to be installed after 2016. The limit is more forgiving for plants set up before 2004, allowing for up to 100 milligrams. In comparison, China allows a maximum of 30 milligrams for all plants, while in the EU the limit varies from 10 milligrams to 20 milligrams. In the U.S., the permissible limit is 10.9 milligrams, according to the Clean Air Task Force. Modi's government plans to make India's power plants so clean the surroundings could be picnic spots for families, power, coal and renewable energy minister Piyush Goyal said. (www.bloomberg.com)

Bihar mulls banning gas guzzlers

March 30, 2016. Given the deteriorating air quality in the state capital, the Bihar government is mulling a ban on registration and movement of diesel SUVs (sport utility vehicles) of capacity 2,000 cc and above. The state government announced that it had already banned 15-year-old diesel vehicles in the city, which is among other measures to control pollution. The state government was considering banning the gas-guzzlers in and around the city. Late last year, the Bihar State Pollution Control Board had sent an advisory to the chief secretary stating that the air quality index of the state capital had crossed 400 in November-December, making Patna the second-most polluted city in the country. Mahindra, which was the worst hit by a Supreme Court ban on diesel vehicles of 2,000 cc and above in Delhi-National Capital Region (NCR), has successfully launched vehicles with 1,990-cc diesel engines for plying in NCR. The new engine Mahindra launched in January has taken care of its NCR market sales. Mahindra can easily replicate the same in Bihar market. (www.business-standard.com)

Global.....

Germany says it's open to talks to strengthen EU carbon market

April 5, 2016. The German environment ministry is willing to consider measures that would strengthen the European Union's emissions trading system. Prices in the world's biggest cap-and-trade carbon program dropped 37 percent this year amid a persistent oversupply of permits to pollute. It failed to draw support from the global climate deal signed in Paris and an EU agreement to overhaul the emissions market never came to fruition. European policy makers decided last year to introduce the Market Stability Reserve, which will help limit the glut of allowances, starting in 2019. Germany, Europe's biggest emitter of carbon dioxide, is struggling to stay on track to meet its target of cutting the greenhouse gas by 40 percent by 2020 compared with 1990 levels. The country had reached 27 percent by last year, the Federal Environment Office said. (www.bloomberg.com)

Climate change may flood lower Manhattan by 2100: Kerry

April 5, 2016. U.S. Secretary of State John Kerry warned that rising seas could devastate coastal cities including New York if nations do not aggressively adopt renewable energy to reverse the damage fossil fuels are inflicting on the environment. The past two decades have been the hottest on record, Kerry said. If greenhouse gas emissions continue unabated, he said, the total rise of the sea could reach five or six feet by the year 2100. That would wipe out a big swath of the biggest U.S. city, including the street where Thomas Edison first generated electricity. Kerry invoked Thomas Edison, whose first electric power plant stood on the southern tip of Manhattan four miles south of where he spoke. That plant, on Pearl Street in lower Manhattan, triggered a global energy revolution, fueled by coal, gas and oil. Only now, Kerry said, do nations around the world fully understand the consequences. Still, there is still time to reverse the trend, he said. Kerry pointed to the deal brokered last year in Paris, where envoys from 195 nations agreed to cut emissions, to the extensions of tax credits in the U.S. to encourage wind and solar developments and to a push by nations around the globe to turn toward clean

energy. And even oil-rich countries including United Arab Emirates have pledged to diversify their energy sources, Kerry said. (www.bloomberg.com)

Japan plans to cut solar feed-in tariffs by 20 percent within 3 yrs

April 5, 2016. The Japanese government has decided to reduce solar feed-in tariffs as of April 2016, as rising installations will enable the country to meet its renewable target (22-24% of electricity from renewable sources by 2030, including 7% from solar). In fiscal year 2016, tariffs will be set at Yen 24/kWh (US\$21c/kWh) for solar installations of at least 10 kW, and between Yen 31/kWh and Yen 33/kWh (US\$27-29c/kWh) for installations below 10 kW. Tariffs will be cut by Yen 2-3/kWh per year through fiscal year 2019-2020, until reaching Yen 17-18/kWh for large systems and Yen 24/kWh for small installations. (www.enerdata.net)

Enel breaks ground on new solar power plant in Brazil

April 4, 2016. Italian energy company Enel said it started building a \$175 million solar power plant in northeastern Brazil. Enel Green Power Brasil Participações (EGPB), is building the Lapa solar power plant in Bom Jesus da Lapa, a city in Bahia state, the company said. The power plant being built by EGPB, Enel's unit in the South American country, will have installed generating capacity of 158 MW and will be able to generate about 340 GWh annually, or enough electricity to meet the annual energy needs of more than 160,000 households in Brazil. The Lapa solar power plant could be finished by mid-2017, keeping nearly 198,000 tons of CO₂ from being emitted into the atmosphere, Enel said. EGPB is building Ituverava, a 254 MW solar power plant, and the 180 MW Delfina wind farm in Bahia. Enel's Brazilian unit currently has totaled installed generating capacity of 506 MW, of which 401 MW are from wind energy, 12 MW from solar and 93 MW from hydroelectric power plants. (latino.foxnews.com)

Kenya's REA to build 55 MW solar power plant

April 4, 2016. Kenya's Rural Electrification Authority (REA) will build a 55 MW solar park in Garissa, eastern Kenya that, once completed, is expected to be largest solar power plant in eastern and central Africa. The authority said its board has approved the construction of the KES 12.8 billion (USD 126.2 mn) facility. The project will be financed through concessional funding from the Chinese government. Construction is due to start in July 2016 and be completed in a year. The installation will consist of 210,210 solar panels of 260 W each, expected to generate enough electricity to power a whopping 625,000 homes. Kenya was listed among the "Rising stars" in the latest Ernst & Young country ranking in February in terms of attractiveness for all renewables along with 10 other markets, including India, Chile and Morocco. So far Kenya has focused on its geothermal resources in the Rift Valley, but it also has wind and projects in progress. (renewables.seenews.com)

SunPower wins 500 MW solar power projects in Mexico

April 4, 2016. American energy firm SunPower has secured power purchasing agreements (PPAs) in an auction conducted in Mexico to supply one terawatt-hour of energy, which is equivalent to about 500 MW. SunPower will supply the solar energy to Comision Federal de Electricidad (CFE) over the term of the agreement. The auction was part of the reforms undertaken by the Mexican government to open up the domestic energy sector for private sector participation. The projects that SunPower has won in the auction include the installation of about 400 MW in Yucatan and over 100 MW in Guanajuato. Overall, the company has 20% of the total energy, and 25% of the solar energy, awarded from the energy auction, according to the auction results released by Mexico's National Center for Energy Control. In December last year, SunPower had signed a long term power purchase agreement with Grupo Aeroportuario del Sureste, a private airport group in Mexico, to deliver 36 MW of solar power. Currently, SunPower has a manufacturing facility in Mexico, with a capacity to produce over one gigawatt of high efficiency solar panels annually. The company had announced the start of construction of 27 MW-peak (MWp) photovoltaic solar power plant in Nanao, Ishikawa Prefecture, on Honshu Island in Japan, in partnership with ISE Group, and Total. (solar.energy-business-review.com)

Enel inaugurates world's first triple renewable hybrid power plant in US

March 30, 2016. Italian renewables developer Enel Green Power has inaugurated the triple renewable hybrid plant in Fallon, Nevada, US. Claimed to be the first of its kind, the Stillwater renewable hybrid facility is designed to produce renewable energy by combining geothermal, solar thermal and solar photovoltaic technologies. The facility will increase energy availability and reduce energy intermittency by combining geothermal and solar technologies at a single

production site. The hybrid project has been developed under the framework of the cooperative research and development agreement with the National Renewable Energy Laboratory and Idaho National Laboratory, under the oversight of the US Department of Energy Geothermal Technologies Office. (solar.energy-business-review.com)

Mexico first power auction awards 1.7 GW of wind, solar

March 30, 2016. Renewable energy developers won contracts to produce 1,720 MW of power in Mexico during the country's first-ever private auction, after the government ended a decades-long state electricity monopoly in 2013. Seven wind and solar companies including Enel Green Power, SunPower Systems Mexico and Recurrent Energy won 15-year contracts to rights to provide the state-owned Comision Federal de Electricidad with power beginning in 2018, Cesar Emiliano Hernandez, Mexico's deputy electricity minister, said. The contracts are expected to generate more than \$2.1 billion in investment by 2018, he said. Mexico is restructuring its energy markets in an effort to spur billions in investment after a historic overhaul approved in 2013 to open state-run monopolies in the oil and electricity industries. The government has set a goal of getting 35 percent of its energy from clean sources by 2024, up from 25 percent now. Eleven packages of wind and solar projects and certificates were sold at an average price of \$41.80 per megawatt-hour. Prices for solar averaged \$40.50 per megawatt-hour, while prices for wind averaged \$43.90. Solar energy accounted for 1,100 MW sold, and 620 MW of wind projects were awarded long-term contracts. Clean-energy projects were able to sell more than 5 million 20-year clean-energy certificates. Large electricity consumers will buy the certificates to meet an obligation to get 5 percent of their energy from sustainable sources by 2018. Mexico is seeking to add 20 GW of clean energy in the next 15 years, according to the National Electricity System Development Program. The country has forecasted as much as \$62.5 billion in private investment in the energy industry by 2018. (www.bloomberg.com)

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ORF Mission: Building partnerships for a Global India

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- *Aid and impact formulation of policies and evolve policy alternatives.*
- *Create a climate conducive to effective implementation of these policies.*
- *Strengthen India's democratic institutions to enable coherent, reasoned and consistent policy-making.*
- *Provide reasoned and consensual inputs representing a broad section of opinion to improve governance, accelerate economic development, and ensure a better quality of life for all Indians.*
- *Monitor strategic environment*
- *Work towards achieving international peace, harmony, and co-operation.*
- *Give direction to India's long-range foreign policy objectives.*