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**ANALYSIS /
ISSUES**

**DATA
INSIGHT**

**Volume XII
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[MARCH 2016: HOPE OF OIL DEMAND TAKE-OFF]

“The mood in the upstream oil industry in India was anything but optimistic. Public sector and private sector players were either blaming each other or blaming the government for their financial woes. The legal fraternity dealing with the industry were said to be having the best time in their lives representing one of the other of the warring factions in arbitration proceedings...”

**[RENEWABLE
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- PM Modi to woo Saudi for energy investment during visit
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[NATIONAL: POWER]

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- BHEL commissions 40 MW hydropower plant in West Bengal
- Mundra UMPP has eroded Tata Power's net worth by ₹ 38 bn in 3 yrs

- BHEL commissions 600 MW unit of Singareni project in Adilabad
- 4th unit of NTPC-Bihar govt owned 195 MW plant synchronised

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- PMs of India, Bangladesh commission internet, power supply

Policy / Performance.....

- Companies informed of uniform power tariff: Maharashtra Energy Minister
- India to rely on state miners to meet coal target: Goyal
- RBI announces private placement of special securities under UDAY
- AP to roll out smart metering services
- 50 mn homes in India yet to access electricity: Goyal
- India, France sign MoU for construction of 6 nuclear reactors
- Odisha plea to centre on OTPCL coal block

[INTERNATIONAL: OIL & GAS]

Upstream.....

- ADNOC 'open' to more partners at onshore oil fields
- Keppel delivers two rigs for Pemex's \$5 bn Cantarell oil field offshore Mexico
- China's 4th largest oil producer said to cut pay, investment

Downstream.....

- Total Port Arthur refinery shutting units for work
- China end-February commercial fuel stocks at 4 year high

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- Gas firms in Israel to push ahead with export efforts
- Morocco's Samir seeks supplier of 8 mn barrels of crude oil
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- US imports of Nigerian crude hit nearly 3 year record high
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Policy / Performance.....

- Hedge funds establish near-record bullish bet on rising oil prices
- China natural gas price cuts seen luring customers from coal
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- UK oil tax cut may not give desired benefit amidst low oil prices
- Oman Oil in talks with banks on \$1 bn loan for subsidiary
- Russian Economy Minister says sees oil at around \$40/bbl in 2016
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- Oil security seen at risk by IEA on 'historic' spending cuts

- India, China led investments in renewable energy in 2015: UN

GLOBAL.....

- WTO rules for some Argentina claims in EU anti-dumping biodiesel duty row
- Amec Foster to build biomass dust combustion plant in Finland
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- Exxon Mobil must allow climate change vote: US SEC
- US, Argentina take steps to tackle climate change
- Australia launches \$762 mn fund to invest in emerging clean energy technologies

[INTERNATIONAL: POWER]

Generation.....

- Construction of Indonesian coal-fired power plant to start
- ScottishPower stops Longannet 2.4 GW coal-fired power plant

Transmission / Distribution / Trade.....

- Japan's power market opening challenges entrenched players
- Turkmenistan builds new power transmission line towards Afghanistan

Policy / Performance.....

- Japan's NRA approves Ikata-3 nuclear plant safety upgrades
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[RENEWABLE ENERGY / CLIMATE CHANGE TRENDS]

NATIONAL.....

- Torrent inks pact to develop 197.4 MW wind power project
- UP solar projects find bidders at ₹ 4.43 per kilowatt hour
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- ADB, USAID to assist India in developing clean energy projects
- Govt to rate mines based on sustainable development practices
- Electric vehicles for all by 2030: Goyal

COMMENTS.....

India monthly energy briefing

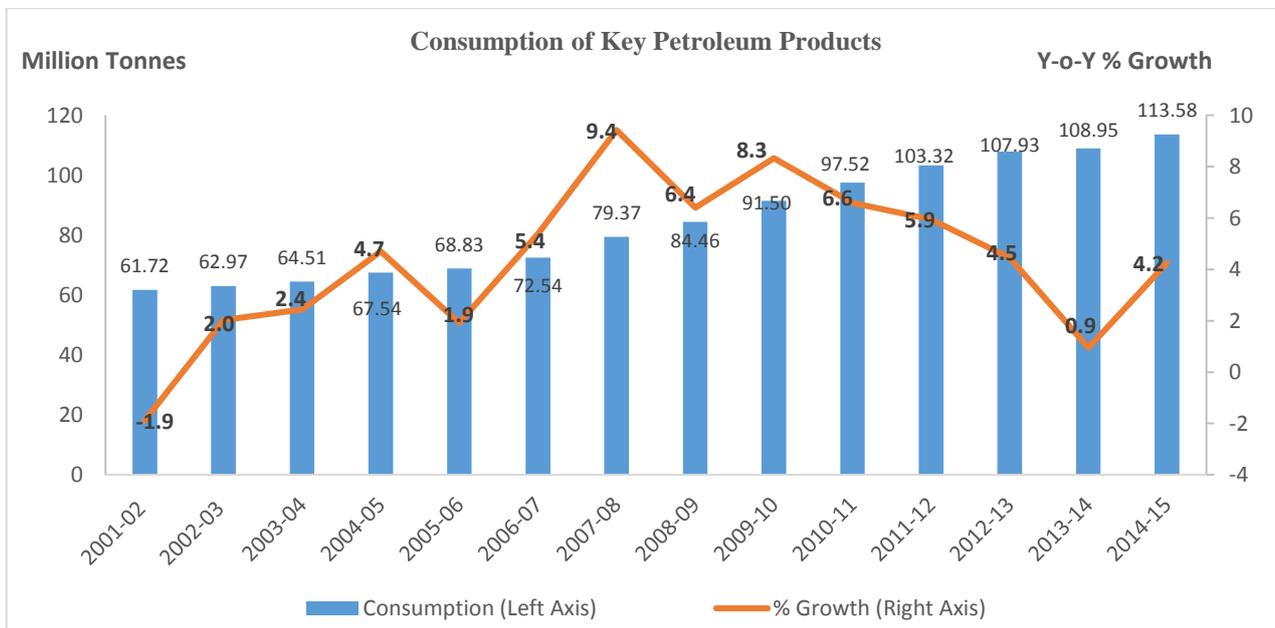
March 2016: Hope of Oil Demand Take-Off

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

Conventional Fuels

Oil & Gas

The most optimistic news for the global oil market came from India this month. Demand for oil in India is expected to be on the verge of take-off similar to China's in the late 1990s according to a paper from the Oxford Institute for Energy Studies. The doubling of year on year growth of 300,000 barrels per day (bpd) in 2015 compared to a growth of between 100,000 and 150,000 bpd during the previous decade is the basis of the optimism over demand growth for oil in India. The growth in demand for personal vehicles (cars plus two wheelers) is said to be behind this anticipated growth in demand. In 2014 the number of cars for thousand people was 20 in India compared to China's 90. When two wheelers are included in the count of personal vehicles in India the number of vehicles for thousand people increases to 144 in 2014. The argument made in the paper is that if China's vehicle ownership of cars could increase from about 20 per thousand people in just over a decade, India's oil demand can increase even more in the next decade given low oil prices combined with better prospects for economic growth. This may be sound of music for car makers and oil retailers but the not for anti-fossil fuel groups who want to keep fossil fuels in the ground. The government for its part announced this month that new policies for the oil & gas sector would attract huge investments. If you ask the anti-fossil fuel lobbyists they would say that this investment is being made in assets that would be worthless soon.



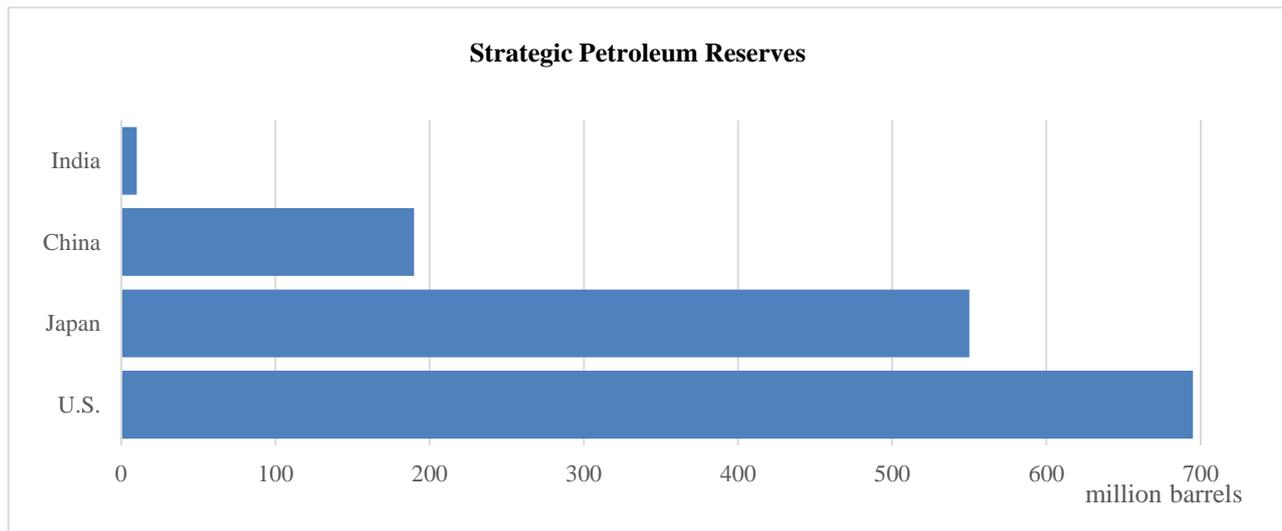
Note: Here, key petroleum products means - LPG, Petrol, Kerosene & Diesel. (for more details please refer Data Insight at page no. 9)

Source: Compiled from Statistics from Petroleum Planning & Analysis Cell.

The mood in the upstream oil industry in India was anything but optimistic. Public sector and private sector players were either blaming each other or blaming the government for their financial woes. The legal fraternity dealing with the industry were said to be having the best time in their lives representing one of the other of the warring factions in arbitration proceedings.

Russia was in the news this month as India's OVL along with the Indian Oil Corporation (IOC), Oil India and Bharat Petroleum were said to be in advanced talks to buy 35% additional stake in Russia's Vankor oil field in Siberia for close to \$ 3 billion. In addition Russia's Rosneft was reported to be about to buy 49% stake in India's Essar Oil for \$2-3 billion. Observers in India and elsewhere were not clear as to what benefit this investment would bring to Rosneft.

There was hope that OPEC nations would be attracted by the exemption from central taxes on local sale of oil to store oil in storage facilities developed in India. It is estimated that it would cost India over \$5 billion to store 130 million barrels of oil. If OPEC nations rent India's facilities to store oil the financial burden of holding strategic stocks can be lightened.



Source: Bloomberg

On the downstream front the return of private refiners to fuel retailing and the initiation of purchase of crude from Iran by Indian refiners hitherto burdened by sanctions against Iran were key developments reported in the media. The big splash made when private refiners entered fuel retailing more than a decade ago was missing this time.

There was some positive news for Indian natural gas producers with government moving closer to offering higher prices for gas production from 'complex' fields. What is 'complex' and what is not may be the result of technical, legal and political considerations. However the idea of keeping prices high through a formula that links Indian gas prices with that of international prices appears to have been abandoned for the time being. Interestingly Indian gas companies that want high domestic prices seem to be betting on sustained low prices in international markets as they are commitments on prices in trans-border pipelines projects.

Coal

Ironically positive news seemed to be coming out of the coal sector at a time when the most positive news would have been negative news on coal production. Coal production by CIL crossed the 500 million tonnes mark at a time when demand for coal is slackening. The government appeared to be trying hard to increase the attractiveness of procuring coal through electronic portals and anti-theft devices.

The Standing Linkage Committee (Long-Term) has been authorized to recommend the Letters of Assurance (LOAs) for supply of coal. In 2013 signing of Fuel Supply Agreements (FSAs) in respect of 78,000 MW capacity power plants which had been commissioned or are likely to be commissioned by March 2015 was approved by the concerned authority. Interestingly, due to negative coal balance reported by subsidiary coal companies of Coal India Limited (CIL), new linkages/ Letters of Assurance (LoA) have not been granted to any of the sectors since 2010.

The government is now looking to supply coal to power plants of 4660 MW capacity that do not have any fuel linkage subject to the availability of coal. This supply would not adversely impact the availability of coal for the identified plants of 78,000 MW capacity. Apart from this the coal linkages/LOAs issued to the power producers will be converted into long term FSAs after achievement of prescribed milestones.

In a bid to liquidate pit head coal stocks, CIL has offered 14 million tonnes to the Power sector and 4 million tonnes to the non-Power sector under special e-auction. But the initiative did not succeed as unsold volume of coal lying with CIL is estimated to be about 42.25 MT.

In order to increase transparency in business operations of CIL, the government launched a web portal for distribution of coal by State Nominated Agencies (SNA). The web portal is expected to provide small and medium consumers access to information about SNAs, availability, booking/supply distribution of coal in public domain. The move to digitise information and open it to public scrutiny will save time and energy got all stakeholders.

Another positive initiative of CIL is the modification that it has introduced in the business clauses of its contracts. The quarterly quantity to be supplied within the same quarter has now been extended till the end of the contract. Two more clauses - coal that could not be supplied due to the railway failure which was considered as deemed delivery and termination of FSA if the level of lifting is less than 30% have been done away with. These changes will offer consumers greater liberty to exercise their choice of lifting the coal at any time during the contract period.

On the commercial mining front, the government has delayed the auctions of coal blocks identified for private players due to poor response. The government is hoping that when demand for fuel revives there will be bids for coal blocks. Investors appear to be still worried about oversupply.

Power

The states signing up for UDAY scheme launched by the central government continued to make news in March. Punjab and J&K were among the latest states signing up for the scheme. The scheme seeks to replace 50% of high cost debt (13% interest rate) of discoms with state government bonds (8% interest rate). Many of those who have seen similar schemes for restructuring oil retailing companies' under-recoveries by moving financial burdens to the future in the form of bonds have their doubts over the success of a similar scheme for power. While the dramatic fall in oil prices rendered the scheme for the oil sector redundant no such developments can be expected in the power sector. Barring a sweeping move to write off loans and start afresh the distribution segment is unlikely to show any dramatic change. State government development loan bond yields are reported to be moving up already which generally indicates trouble. There was unusual number of news items on nuclear power plants making progress. What was behind this was unclear but global trends do not offer hope. EDF could not raise money for its UK projects without the aid of Chinese money. Will India welcome Chinese participation in the Indian nuclear sector? Meanwhile the price of traded power recorded an all-time low of ₹ 2.30/kWh. While this may be a passing trend, solar electricity generators must watch out!

Renewable Energy

Energy news was dominated by news on progress of renewable energy projects as it has since the new government took over. For his part the Minister in charge of New and Renewable energy announced that renewable energy would be the focus of this government for the next seven years which made the sector even more attractive for investors. The doubling of cess on coal to ₹ 400/tonne is expected to contribute to the attractiveness of the solar sector. However ground realities appear to be telling a different story. The recent auction of solar projects by the Solar Energy Corporation of India is reported to have received weak response. Perhaps the viability gap in the sector cannot be bridged by viability gap funding.

Views are those of the authors

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Recurring Droughts and Power Sector in India

Shankar Sharma, Power Policy Analyst

While the drought is nothing new in India, various factors such as fast reducing green cover, El Nino, Global Warming etc. seem to be resulting in such occurrence more frequently. A well noticed consequence of such drought has been on the power sector and fresh water availability to the people living near the coal power plants.

While this is not the first year when Raichur Thermal Power Station (RTPS) in Karnataka has been impacted by lack of water in river Krishna (and the availability of coal from distant coal mines sometimes), this year it has been severe with one or more units having been shut down almost continuously due to the lack of water since February. The water availability scenario in that river cannot improve considerably till the onset of monsoon by the middle of June, unless unusual rains in Maharashtra or in North Karnataka changes the scenario.

What is even more troubling is that two more coal power plants (a total of 4 coal power generators) are under construction nearby with dependence on the same river basin for water supply. An Ultra Mega Power Project (UMPP) by NTPC (4*800 MW) also is being constructed against all techno-economic norms and against popular opposition near Almatti reservoir across the same river Krishna upstream of Raichur.

It is a glaring fact that there can be no assurance of adequate water supply to all these coal power plants in the future, in the context that the Krishna river generally has vastly reduced water flow in Karnataka stretch between January and June. A drought year will make this even worse.

The issue is also similar in the case of the other major river in the region i.e Tunga-Bhadra on which one coal power plant is depending (near Bellary town) and on which few more Units are being planned. Some more coal power plants are reported to be planned for the same region north of this place (designed to get water from tributaries of Krishna?). A coal power plant is also being considered to be built in a relatively more green area in South Karnataka near Western Ghats (Hassan district) which will add water scarcity and pollution to other existing problems of the area.

It has been a well-known fact that the North Karnataka region, wherein all these existing and the proposed coal power plants (except one on the West coast and one in South Karnataka) are/to be located, has been known for water shortage for centuries (even for drinking and agriculture). In such a scenario, it cannot be termed by no stretch of imagination, as a sane planning to build coal power plants in Karnataka, which also has no known reserve of coal.

Even the coal power plant on the west coast of Karnataka, which is alleged to have heavily impacted the lush green foothills of Western Ghats, also is reported to be planning to add two more units at the same site. Fresh water cannot be said to be plenty here, as is evidenced by the usage of sea water for this plant. In addition to impacting the local environment this particular plant is associated with the destruction of thick forests in Western Ghats because of the transmission lines needed to evacuate the power to the load centres of Karnataka.

People have been highlighting these issues for many years, but there is no let-up in building more of ill-conceived coal power plants.

Scenario has been similar in many other states of the Union, such as in the states of Maharashtra, Andhra Pradesh and Telangana; all adding up to major crises not only for the power sector, but also for the water needs of the people. It is an indication of poor vision on part of our leaders that such decisions are being taken despite about 53% of the land area of the country is officially designated as water stressed. A rational analysis of various associated issues before building a coal power plant, should not have allowed any coal power plants

in the country, at least during the last few decades, but a large number of such plants are being built and planned to be built without any consideration of such societal level issues.

The unambiguous issue of water-energy nexus should have been at the focal point of our country's developmental paradigm. But sadly we have ignored not only this, but also the true welfare of our communities.

In the present context of recurring droughts one would have expected the policy makers to take a conscious decision to move away from coal dependency early. Whereas the recent trend has been to reduce the coal power dependency in various parts of the world, due to the issues of economy, pollution and Climate Change, India seems to have determined to defy such wise policies, and ignore the issues which may lead to the destruction of the ecology, natural resources and people's overall welfare for the benefit of few vested interests.

It is difficult to come to a conclusion that the phenomenon of recurring droughts will impact the coal expansion plans in the immediate future, but that has to happen sometime. If such climatic/geographic features of our country were to have been rationally considered by our planners, we would have moved away from coal and other conventional power sources a long time ago; but that has to ultimately happen if not immediately. But the real concern is by that time lot of our agricultural lands would have been spoiled, considerable amounts of public money would have been wasted, our natural resources would have been largely compromised, and our environment would have reached a point of no return.

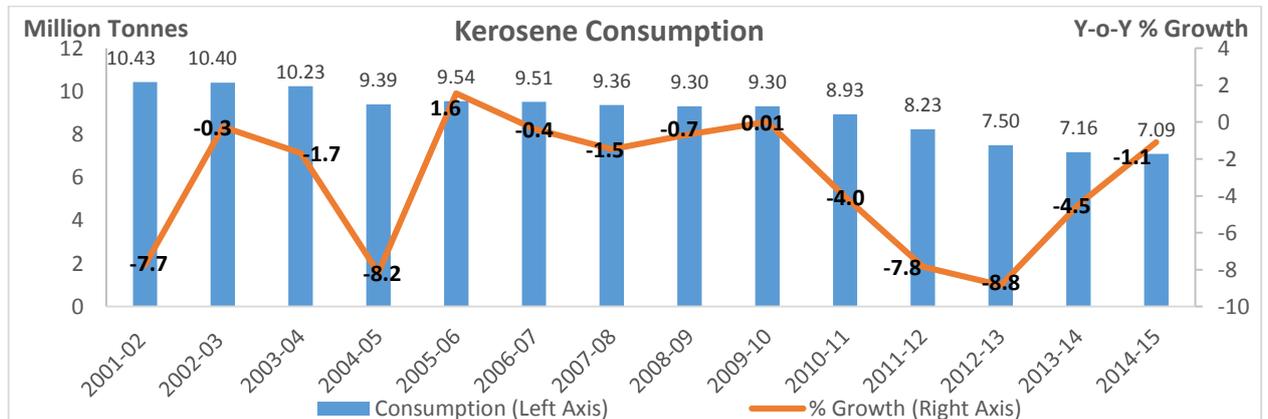
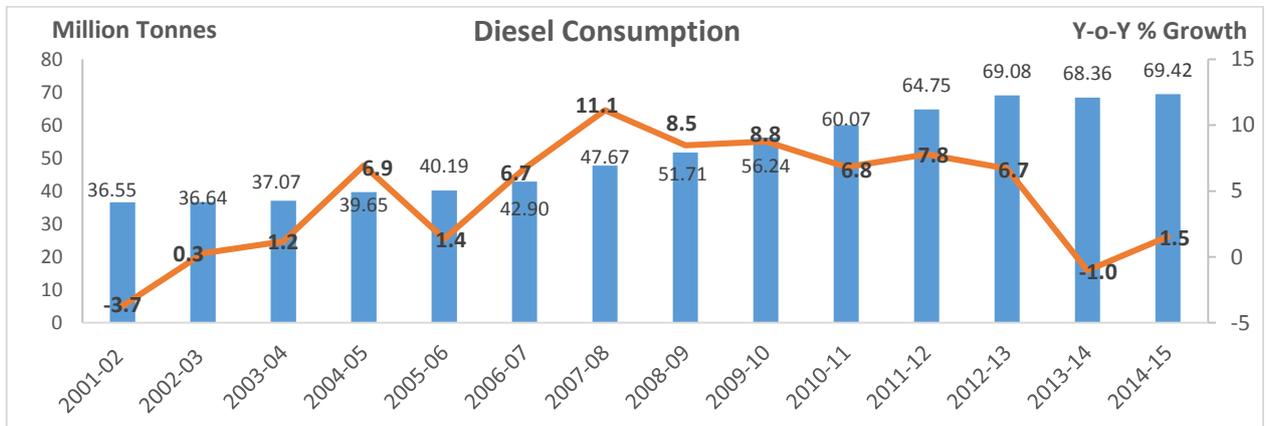
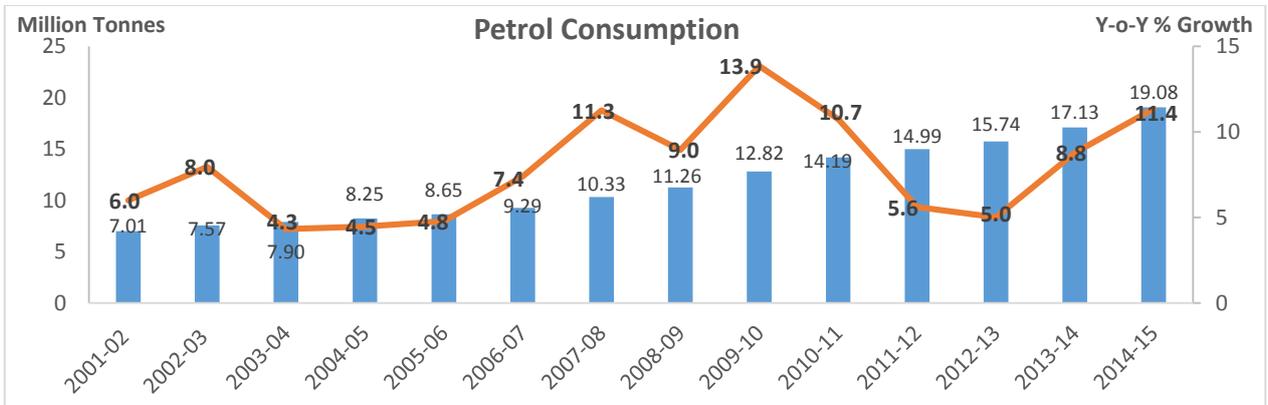
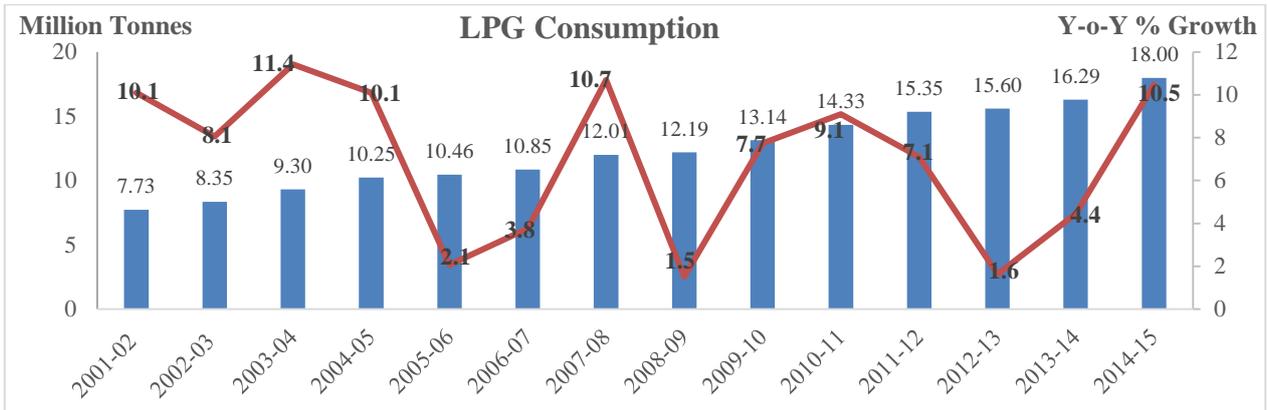
It is sad that even the incidences such as low PLF of many of the coal power plants (lack of demand?), water and coal shortages for some, the financial crises for some other (termed as stranded assets already), few shining examples of renewable energy powering many of our villages etc. have not made our planners to read the writing on the wall.

It is difficult not to project a gloomy situation for the power sector in the country. But let us continue to hope that such natural phenomenon like droughts and increasing opposition to conventional projects will force the authorities to move away from such ill-conceived power projects, and towards a highly efficient, sustainable powered system based on renewable energy sources and micro-grids.

*Views are those of the author
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Petroleum Products Consumption Growth in India

Akhilesh Sati, Observer Research Foundation



Source: Petroleum Planning & Analysis Cell

Y-o-Y: Year on Year

NEWS BRIEF

[NATIONAL: OIL & GAS]

Upstream.....

GAIL spuds first exploratory well in Cambay Basin

March 29, 2016. GAIL (India) Ltd said it had started drilling the first exploratory well as operator in its NELP-IX block CB-ONN-2010/11 in the Cambay Basin. The company said the spudding of the well started in the well situated in Dugari village in Tarapur tehsil of Anand district in Gujarat. GAIL is the lead operator of the block with 25 percent participating interest in it. Other partners in this block are Bharat Petro Resources Ltd, Engineers India Ltd, Monnet Ispat Energy Ltd and Bharat Forge Infrastructure Ltd. Drilling of target depth of 2,500 meters of this well is scheduled to be completed in 40 to 45 days followed by testing for another 10 to 15 days. The consortium will drill eight exploratory wells in the initial Exploration Phase as per minimum work commitment of Production Sharing Contract. While this phase will continue till March 2017, Acquisition, Processing and Interpretation of 2D and 3D Seismic Data have already been completed. (netindian.in)

ONGC to invest \$5 bn to develop KG basin O&G block

March 28, 2016. Oil and Natural Gas Corp (ONGC) announced \$5.07 billion investment in its KG basin oil and gas block but the delay on government's part in approving a higher gas price for difficult areas would mean the output would be delayed by one year to 2019-20. ONGC approved \$5,076.37 million investment in bringing to production 10 oil and gas discoveries in the Bay of Bengal block KG-DWN-98/2 (KG-D5), which sits next to Reliance Industries Ltd (RIL) flagging KG-D6 fields. ONGC had in 2014 announced plans to start gas production from 2018 and oil by 2019 but a final investment decision was made contingent upon government approving a remunerative price for the deepsea block as the current rate of \$3.8 per million British thermal (mmBtu) unit was uneconomical. The government announced a new pricing formula for difficult areas that would at current prices give developers just over \$7 per mmBtu price. ONGC said the field development is economical at the price announced and the board at its meeting today approved the investment plan for Cluster-II group of discoveries in KG-D5. The 7,294.6 sq km deepsea KG-D5 block has been broadly categorised into Northern Discovery Area (NDA - 3,800.6 sq km) and Southern Discovery Area (SDA - 3,494 sq km). The NDA has 11 oil and gas discoveries while SDA has the nation's only ultra-deepsea gas find of UD-1. These finds have been clubbed in three groups - Cluster-I, Cluster-II and Cluster-III. Gas discovery in Cluster-I is to be tied up with finds in neighbouring G-4 block for production but this is not being taken up currently because of a dispute with RIL over migration of gas from ONGC blocks, ONGC said. (www.hindustantimes.com)

OVL gets Russia's nod for \$1.2 bn Vankor deal

March 25, 2016. Russian government has approved ONGC Videsh Ltd's deal to buy 15 percent in the country's second biggest oil field of Vankor from Rosneft for \$1.268 billion. ONGC Videsh Ltd (OVL), the overseas arm of the state explorer Oil and Natural Gas Corp (ONGC), had in September last year signed an agreement to buy 15 percent stake in Vankorneft, the developer of the Vankor oil and gas condensate field in Turukhansky district of Krasnoyarsk territory in Russia. With this, all approvals for the deal are in place and Rosneft has to restructure Vankorneft by giving OVL board positions and carving out the Vankor fields into a separate company, all of which is expected to be completed by June. OVL signed an initial agreement to raise its stake in Vankor to 26 percent from 15 percent, while three other state companies — Indian Oil Corp (IOC), Oil India Ltd (OIL) and Bharat Petroleum Corp Ltd (BPCL) would together pick up 23.9 percent. (timesofindia.indiatimes.com)

Downstream.....

Adani offers 49 pc stake in Dhamra LNG project to IOC, GAIL

March 27, 2016. Adani Group has offered 49 percent stake in its ₹ 5,000 crore Dhamra LNG project in Odisha to state-run gas utility GAIL (India) Ltd and refiner Indian Oil Corp (IOC). Adani has formally written to the two state-owned firms offering them 49 percent stake in the 5 million tonnes a year liquefied natural gas (LNG) import terminal planned at Dhamra by 2018-19. IOC had last year signed up to use 60 percent of the terminal capacity for importing gas for its refineries at

Haldia in West Bengal and Paradip in Odisha. GAIL too had signed up for 1.5 million tonnes of the terminal's regassification capacity. The two firms have agreed to take equity in the project but they are yet to decide on the proportion in which the 49 percent stake would be split. GAIL and IOC were initially bargaining for 50 percent stake in the project but Adani wanted to retaining controlling 51 percent interest. Dhamra will be the sixth LNG project announced on the east coast. While GAIL has dropped plans of a four million tonnes project at Paradip, Petronet LNG Ltd -- a firm in which GAIL and IOC are promoters -- has cold-storage plans to set up a five million tonnes a year LNG import facility at Gangavaram in Andhra Pradesh. GAIL, along with GDF and Shell, has proposed a 3.5 million tonnes floating LNG terminal at Kakinada while IOC is building a five million tonnes facility at Ennore in Tamil Nadu. Real estate player Hiranandani Group plans to set up a ₹ 2,400 crore, 4 million tonnes floating LNG import terminal off Haldia in West Bengal. (timesofindia.indiatimes.com)

BPCL plans to spend ₹ 100 bn to boost its refining capacity

March 23, 2016. Bharat Petroleum Corp Ltd (BPCL) plans to spend about ₹ 10,000 crore in 2016-17 to expand and upgrade its refining capacity and augment its marketing infrastructure. The petroleum product consumption had grown by 10% till January this fiscal year. An expansion underway at Kochi refinery will take about 40% of the BPCL's planned capex for 2016-17. The refinery is adding 6 million tonne per annum (mtpa) to the existing capacity of 9.5 mtpa. BPCL's total capacity is about 27.5 million tonne. Another ₹ 1,000 crore would go towards upgrading other refineries to help them produce higher grade fuels that meet Euro IV and VI emission norms. The government wants all state refiners to make available Euro IV fuels across the country next year and Euro VI by 2020. About ₹ 1,000 crore would be utilised by the company's upstream business managed by Bharat Petro Resources that has just bought nearly 10% stake in an east Siberian field owned by Rosneft. The balance funds would be deployed in building a petrochemicals unit, pipelines, marketing terminals and depots, and procuring cooking gas cylinders. BPCL and other state firms are now facing tough competition from the private sector in the key fuel retailing business and need to invest more to strengthen their position in the market. In a year after the deregulation of diesel sales, Reliance Industries, Essar Oil and Shell have together taken about 4% in petrol and diesel volumes across the country and threaten to gobble more quickly with their price discounts and other promotional efforts. An ambitious target set by the government to add about 10 crore cooking gas consumers in three years, or about 60% of the current base, means distributors like BPCL will have to invest heavily in setting up import and distribution terminals and bottling plants as well as in purchasing more gas cylinders. (energy.economictimes.indiatimes.com)

MRPL to shut crude, diesel units at refinery from April 1

March 23, 2016. Mangalore Refinery and Petrochemicals Ltd (MRPL) will shut a crude unit that can process 180,000 barrels of oil per day for about a week from April 1 for maintenance. The refiner, which operates a 300,000 barrels of oil per day coastal refinery in southern India, will also shut a diesel hydrotreater for about two weeks from April 1. ONGC Mangalore Petrochemicals Ltd (OMPL) will also carry out maintenance at its continuous catalytic reformer and linked naphtha hydrotreater for about two weeks due to the shutdown of the crude unit. The MRPL refinery supplies naphtha for processing at OMPL's aromatic complex. (in.reuters.com)

Transportation / Trade.....

RIL February oil imports rise 13.7 percent on month

March 29, 2016. Reliance Industries Ltd (RIL), owner of the world's biggest refining complex, imported 13.7 percent more oil in February compared with January, according to tanker arrival data. The share of Middle Eastern oil rose to about 64.5 percent in overall purchases in February from about 52.6 percent in the previous month, the data showed. The company, which has a diversified crude slate and shifts purchases to maximise revenue, bought about 1.45 million barrels per day (bpd) last month, about 27.1 percent more than a year earlier. Reliance last month shipped in a small quantity of Indonesian grade Banyu Urip, the first purchase by India from the East Asian nation in more than a decade. The share of African oil in Reliance's overall imports in February declined to about 4 percent from 11 percent in January, while that of the Latin America fell to about 30 percent from 36.4 percent, the data showed. Reliance's two advanced refineries in the western state of Gujarat can together process 1.2 million bpd of oil, or about 26 percent of India's overall capacity. (economictimes.indiatimes.com)

Reliance Defence delivers 1st ship after Pipavav takeover

March 28, 2016. Reliance Defence has delivered its seventh offshore supply vessel to Oil and Natural Gas Corp (ONGC) from its stable of indigenously designed and built ships, on an order valued at ₹ 700 crore, the company said. But this is

the first vessel delivered by the shipyard after the takeover of Pipava Defence on Jan 18, 2016, the company said. The vessel completed its sea-trials in two days to the satisfaction of ONGC and Indian Register of Shipping. The vessel will facilitate the buyer in substituting its older fleet and chartered vessels as well as bring in high level offshore operations, the company said. The fleet has been designed as new generation vessels with customised features for Indian waters and offshore fields. It can carry 1,800 tons of cargo at its deepest draught and is designed to carry varied cargo such as freshwater, cement and fuel oil, the company said. The company has served international clients like Transocean, Shelf Drilling, NPCC and Noble Energy. (economictimes.indiatimes.com)

Gazprom to sell 4 LNG cargoes to GSPC

March 24, 2016. Gazprom Marketing & Trading will sell four liquefied natural gas (LNG) cargoes to India's Gujarat State Petroleum Corp (GSPC) between June and March 2017, following a recent tender, traders said. The tender attracted a lot of interest from trade houses and suppliers, traders said. GSPC paid a price between the low- to mid-11 percent range of a barrel of crude oil, according to traders. (in.reuters.com)

Middle East to dominate oil imports into India: IEA

March 24, 2016. The Middle East will continue to be a big source of crude oil imports for India with the US being another potential source as country's oil demand is set to increase to five million barrels per day by 2021, the International Energy Agency (IEA) has said. India used almost four million barrels per day of oil in 2015, backed by the strong fuel demand from the transportation sector, especially the ever increasing number of vehicles and trucks. Neil Atkinson, Head, Oil Industry and Markets Division at IEA, said that the Middle East will continue to be the main source of crude imports for India. Atkinson saw the US being another potential source of crude oil supplies to India over the long-term, albeit the volume may not be significant. The US could be another source of crude oil supply which could benefit India in the years ahead, he said. He also see the possibility of India stockpiling oil, like being done by China for security against any disruption given the instabilities in major hydrocarbons producing regions. An oil industry source estimated India's crude oil stockpiling requirement at 100 million barrels, compared to China's ongoing stockpiling of 300 million barrels, with a target of 500 million barrels. India's current oil demand is about a third of China's and it should hold at least 100 million barrels as security against any disruption to supplies though it is fastest energy growing market and closest to the Middle East suppliers. The US has the world's largest stockpile of crude oil at 700 million barrels. (timesofindia.indiatimes.com)

Policy / Performance.....

Reforms to boost gas output 22 percent to 110 mmscmd by FY21: ICRA

March 29, 2016. Recent reforms in the oil and gas sector involving market-linked pricing will help the country drill out 22 percent more gas at 110 million metric standard cubic metre per day (mmscmd) by 2020-21, rating agency ICRA said. The government unveiled a slew of reforms to attract investments into the domestic oil and gas sector by nearly doubling gas prices to over \$7 a unit, apart from liberalising pricing. It expects domestic gas production to rise to around 110 mmscmd by FY21 and 130 mmscmd by FY25 from 90 mmscmd in FY16. Similarly, demand for gas will be rising to 250 mmscmd by FY20 and 290 mmscmd by FY25 from the current demand of 230 mmscmd. But this projected demand is lower than what the agency had earlier projected at 275 mmscmd by FY20 and 330 mmscmd by FY25, saying gas demand will fall due to stiff competition from liquid fuels. Significantly, the peak levels of actual consumption in the past were 170 mmscmd in FY12 and 177 mmscmd in FY11. But actual consumption has declined consistently since to around 140 mmscmd in FY15 and FY16. Domestic gas prices have seen two downward revisions, in April 2015 and October 2015, following which the prices declined by 24 percent to \$3.88 per million British thermal unit (mmBtu) in second half of FY16 from \$5.05 per mmBtu in November 2014 - March 2015. According to ICRA estimates, natural gas prices for the challenging areas works out to \$6-6.5 per mmBtu now, but this may keep varying in line with the prices of substitute fuels. Over the next few years, ONGC's blocks in the Krishna-Godavari Basin (KG-DWN-98/2), B-& C-clusters, Daman offshore blocks and North and South Re-development Phase 3 of Bombay High could be the leading contributors to the incremental production. (www.business-standard.com)

PM Modi to woo Saudi for energy investment during visit

March 28, 2016. As Prime Minister (PM) Narendra Modi prepares to make his first visit to Saudi Arabia, the focus will be on enhancing the security and investment components of the bilateral relationship. Saudi Arabia is India's top energy supplier, displacing Iran during the height of the sanctions. India expects major investments from Saudi Arabia particularly

in the infrastructure and energy sectors, since Saudi investment in India is a very low \$58 million. However, with oil prices at historic lows and Saudi Arabia posting the first budget deficit (\$98 billion), the Saudi government's attention this year appears to be on rationalizing the subsidy program. (timesofindia.indiatimes.com)

90 lakh people give up LPG subsidies in 1 year: Govt

March 27, 2016. Prime Minister (PM) Narendra Modi has been urging the "well-off" of the nation to give up their subsidies which can be used for the poor. More than 90 lakh people have given up their LPG subsidies since the 'Give it up' initiative was first rolled out a year ago. On March 27, 2015, Prime Minister Narendra Modi appealed to the "well-off" of the nation to give up their LPG subsidy so that it can benefit those in dire need. The aim was also to bring down the country's dependence on energy imports by 10% by 2022. Modi said that 2.8 lakh people giving up their LPG subsidy would lead to a benefit of at least ₹ 100 crore. The government rolled out the direct benefit transfer system for LPG subsidies, saying that transferring the benefit to the bank accounts directly helped the government save ₹ 15,000 crore in 2015. (www.dnaindia.com)

Oil Ministry not enthused over railways' bid to import crude

March 26, 2016. A proposal by the rail ministry to import crude oil and to book refining capacity with oil companies has failed to cut ice with the petroleum ministry. The railways, the country's largest buyer of diesel, is hopeful of bringing down fuel costs by up to ₹ 1,500 crore through this move, but the oil ministry is not convinced the plan will lead to substantial savings. The railways consumes 2.8 billion litres of diesel a year to run 6,000 diesel locomotives. This costs around ₹ 18,000 crore, nearly a fifth of the railways' ordinary working expenses. Locomotive fuel is procured from oil companies through their networks of depots. A large chunk of the fuel bill goes into paying state taxes. (www.business-standard.com)

[NATIONAL: POWER]

Generation.....

BHEL commissions 40 MW hydropower plant in West Bengal

March 28, 2016. Bharat Heavy Electricals Ltd (BHEL) has commissioned the second 40 MW hydropower generating unit at the Teesta low dam Hydro Electric Project (HEP) stage IV in West Bengal, the company said. A run-of-the-river Greenfield project, located in Darjeeling district of the state, is being set up by National Hydroelectric Power Corp (NHPC). The order was placed with the heavy engineering company by NHPC. The order for the electrical & mechanical (E&M) work of four units of 40 MW each was given to BHEL. The company's Bhopal, Jhansi, Rudrapur, Mumbai and Bengaluru facilities are supplying equipment for the project while the execution of work on site is being carried out by its power sector eastern region. The remaining two units of the project are also in advanced stages of execution, the company said. The estimated annual energy generation of 720 million units from the project is expected to reduce green-house gas emissions and will help in achieving a low carbon development path for the state as well as the nation. The company said hydro generating sets of more than 29,000 MW of various ratings have been contracted on the engineering major in India and abroad. In the country, the company has so far commissioned nearly 400 hydro generating sets of various ratings with a cumulative capacity of around 20,000 MW. (www.thehindu.com)

Mundra UMPP has eroded Tata Power's net worth by ₹ 38 bn in 3 yrs

March 25, 2016. With a decision on allowing compensatory tariff for Tata Power's Mundra Ultra Mega Power Plant (UMPP) pending, the company talks about the losses caused due to higher Indonesian coal prices in the first few years of operation and delay in grant of compensatory tariff. The losses at Mundra (UMPP) have eroded approximately ₹ 3,800 crore of Tata Power's net worth in the past three years. While there has been a considerable decline in the coal prices in international market in the recent times, the plant continues to post losses due to under recoveries on account of cost of coal, which is still higher than the cost of coal prevalent at the time of bidding. The under recovery on account of coal is high enough to eat away the entire margin earned in fixed cost and thus the loss incurred puts tremendous pressure on cash flows of the company. In the past few years, the company had to put in more than ₹ 4,000 crore, beyond its equity contribution to maintain operations of Mundra UMPP. The company is setting up 2,600 MW of capacity abroad. In line with the international strategy, the company continues to evaluate investment opportunities in Africa, Turkey, Middle East, South East Asia and the SAARC region. (www.financialexpress.com)

BHEL commissions 600 MW unit of Singareni project in Adilabad

March 25, 2016. Bharat Heavy Electricals Ltd (BHEL) said it has commissioned a 600 MW coal-based unit at Singareni Thermal Power Project in Adilabad district of Telangana. The project is being developed by Singareni Collieries Company Ltd (SCCL), India's second largest coal mining company. With the commissioning of this unit, SCCL has now successfully diversified into the power generation business. Significantly, this is the second thermal plant commissioned by BHEL in Telangana within a short span of three months. Earlier in December 2015, BHEL had commissioned a 600 MW thermal power plant at Kakatiya in Telangana. The second unit of Singareni TPP is also in an advanced stage of construction and is expected to be commissioned shortly. So far, the company has contracted 21 sets of 600 MW each, of which 15 have already been commissioned. A large number of similar sets ensure easy availability of spares and operators familiarity. BHEL has a major contribution in Telanganas Power Sector, with 85 percent of the coal-based power stations, amounting to 5,180 MW, having been commissioned by BHEL. Telangana has recently placed orders on BHEL for executing around 6,000 MW of thermal power projects in the state on Engineering Procurement Construction (EPC) basis. BHEL has established its engineering prowess by successfully delivering higher-rated units such as 600 MW, 660 MW, 700 MW and 800 MW thermal sets, having a high degree of indigenisation. (indiatoday.intoday.in)

4th unit of NTPC-Bihar govt owned 195 MW plant synchronised

March 25, 2016. The fourth unit of 195 MW Muzaffarpur Thermal Power Station (MTPS) has been successfully synchronised with the national grid. The plant is owned by Kanti Bijlee Utpadan Nigam Ltd (KBUNL) a joint venture between NTPC and Bihar State Power Generation Company Ltd (BSPGCL) in which the two companies have 64.57 percent and 35.43 percent shares, respectively. The third unit of 195 MW was synchronised on March 31, 2015. Bharat Heavy Electrical Ltd (BHEL) has been awarded the job for constructing two units of 195 MW under expansion project. First unit of 110 MW at MTPS started generation in November, 2013 while the second of 110 MW started generation in November, 2014 after successful renovation and modernisation work carried out by BHEL. Both the units of each of 110 MW stopped generation in 2003. Bihar will get 261 MW (67 percent) from MTPS' expansion project under which two units of 195 MW are being constructed at Kanti in Muzaffarpur district. The successful synchronisation of the plant at MTPS would pave way for 'commissioning' of the unit prior to the declaration of 'commercial' operation of the plant. The plant is being constructed at the existing site of an old power plant which would draw water from the river Burhi Gandak, while it would get coal supply from a coal block of Central Coalfield Ltd (CCL) located in Jharkhand. NTPC said that the original estimated cost of the expansion project was ₹ 3,200 crore for the construction of two units of 195 MW plant at Muzaffarpur but the cost of the project has been revised following the escalation of price of land for acquisition. (timesofindia.indiatimes.com)

Transmission / Distribution / Trade...

KSEB floats power bids for 2017 summer

March 28, 2016. With the one project that could help Kerala stave off a power crisis in 2017 mired in uncertainty, the Kerala State Electricity Board (KSEB) has started looking for other options. The state-run power company has floated bids for a daily supply of 200 MW from traders to meet the 2017 summer demand, which is expected to be a trying time for the state's power sector. Since the announcement of the Assembly elections, the government has gone mum on completing the disputed Edamon-Kochi stretch of the 400 KV Tirunelveli-Madakkathara transmission line. According to KSEB, this line - a prerequisite for evacuating Kerala's share of power from the Koodankulam Nuclear Power Plant (KKNPP) - is imperative in the present scenario to prevent power restrictions in 2017. The KSEB is looking for a power purchase agreement that would cover the period from March 1, 2017, to June 30, 2017. (www.newindianexpress.com)

PMs of India, Bangladesh commission internet, power supply

March 23, 2016. Prime Ministers (PMs) of India and Bangladesh commissioned international gateway of internet service in Agartala and supply of 100 MW power to Bangladesh from Tripura. Tripura Chief Minister Manik Sarkar graced the cross border occasion connected through video conference. Agartala has become third station connected to submarine cable for internet bandwidth after Chennai and Mumbai while the state also landed in international power map by starting supply of electricity from Suryamaninagar grid to the grid in Comilla of southeast Bangladesh. Prime Minister Narendra Modi, Prime Minister Sheikh Hasina and Tripura Chief Minister in their speeches termed the commissioning of 10GBPS bandwidth import and 100 MW electricity from south Tripura's 726 MW Palatana gas based project a historic one and a day to

celebrate friendly relations between two neighbours. Hasina mentioned that they have requested India for 500 MW power and both countries are working to commission a 1320 MW plant in Bangladesh. (www.thehindu.com)

Policy / Performance.....

Companies informed of uniform power tariff: Maharashtra Energy Minister

March 29, 2016. All three companies providing electricity to Mumbai have been informed to maintain a uniform electricity tariff for users consuming 0-500 units, Maharashtra Energy Minister Chandrashekhar Bawankule said. Bawankule said the committee under the chairmanship of Principle Secretary (Power) was formed in January 2016. One of the key mandates of the committee is to suggest measures to fulfil power demand by getting electricity through inter-state or intra-state distribution systems. The committee is also empowered to decide and suggest measures related to the starting of Tata Power's Unit 6. The unit, which presently runs on oil, has been closed due to financial reasons. The committee is also mandated with suggesting necessary changes in the city's Development Control rules to reserve plots for power units. (www.thehindu.com)

India to rely on state miners to meet coal target: Goyal

March 28, 2016. India will meet its target of doubling coal production by 2020 without the help of private miners, coal and power minister Piyush Goyal said. India wants to produce 1.5 billion tonnes of coal by 2020 to power its economy and reduce imports. Coal India Ltd, the world's largest coal miner, has raised production in line with reaching a target of 1 billion tonnes a year within four years and the government wants private miners to produce much of the remainder. But only a few companies that won the right to mine coal for their power plants last year have started production as they struggle to recover their costs, while the ministry this month delayed plans to open up commercial mining to private firms because of weak demand and depressed coal prices. Goyal said that state-owned companies including power producer NTPC Ltd, Steel Authority of India Ltd and National Aluminium Co Ltd would instead pick up the slack by expanding their own mining operations. NTPC is on course to produce 300 million tonnes alone by 2020, Goyal said. India's success in boosting its coal output after years of missed production targets has been central to Prime Minister Narendra Modi's energy policy. Despite environmental worries, India plans to continue to depend on burning coal to provide power for its 1.3 billion people, some 300 million of whom still lack access to electricity. The government last year auctioned off captive mines, sites already near end-users such as power plants, to private firms such as Hindalco Industries Ltd and Adani Power Ltd. But most companies have not begun mining and have warned that rules prohibiting them from passing on rising costs to end-users make it tough to recover their costs after aggressive bidding during the auctions. (www.businessworld.in)

RBI announces private placement of special securities under UDAY

March 28, 2016. The RBI asked market participants interested in subscribing to the special securities under Ujjwal Discom Assurance Yojana (UDAY) scheme through private placement route to approach it by March 30. Power Ministry had launched the UDAY in November last for revival of debt ridden power distribution companies (DISCOMs) in different states. The special securities under UDAY are being issued by governments of Bihar, Haryana, Jammu and Kashmir, Jharkhand, Punjab and Rajasthan. Under the scheme, the Centre allows state governments, which own the discoms, to take over 75 percent of the debt as of September 30, 2015 in two years and pay back lenders by selling bonds. For the remaining 25 percent dues, discoms have been allowed to issue bonds. The scheme is expected to help discoms save around ₹ 1.8 lakh crore in the next three years. The cumulative debt of discoms is ₹ 4.37 lakh crore. (profit.ndtv.com)

AP to roll out smart metering services

March 27, 2016. Andhra Pradesh (AP) government will soon facilitate smart metering services for all utilities — electricity, gas and water by integrating its Fiber Grid Project with the e-Pragathi programme. While the Fiber grid network will provide broadband connectivity of 15 to 20 Mbps to all households in the State at ₹ 149 a month, e-Pragathi ensures linking of all welfare and development departments to bring in transparency and providing close to 750 online services of various departments to people. The purpose of smart metering services is also to put an end to misuse, wastage and let people pay exactly for what they consume, Chief Minister N. Chandrababu Naidu said. Though the scheme was proposed by the Centre, AP took the initiative in the country for setting up aerial optical fibre cable network infrastructure. In the second phase, underground optical fiber cable would be laid for about 61,000 km in three years. Phase I of the aerial optic fibre network has been taken up at ₹ 333 crore using the available infrastructure of electrical poles. It would be completed by

April in Srikakulam, Vizianagaram and Visakhapatnam for offering commercial services to public. The works in other districts were under progress, he said. (www.thehindu.com)

50 mn homes in India yet to access electricity: Goyal

March 25, 2016. There are 50 million rural homes without access to electricity, coal and power minister Piyush Goyal said. Goyal said that in Arunachal Pradesh, there were about 808 villages without any access to electricity. The minister said he felt India could become a superpower if the economies of scale are leveraged, greater degrees of transparency introduced and proper monitoring of work ensured. (economictimes.indiatimes.com)

India, France sign MoU for construction of 6 nuclear reactors

March 23, 2016. India and France have signed an MoU (Memorandum of Understanding) for the construction of six nuclear reactors at Jaitapur in Maharashtra, two months after the two countries decided to conclude the techno-commercial negotiations for the project by the year end. The pact was inked at the end of the two-day visit of a high-level delegation of Electricite de France (EDF) to Mumbai for holding discussions with National Power Corp of India Ltd (NPCIL) on the construction of the plants. The EDF visit was a follow-up on the State Visit of French President Francois Hollande to India in January, during which France and India drew up a cooperation roadmap for concluding techno-commercial negotiations for the Jaitapur project by the end of 2016. EDF is now leading the negotiations for the French side, with the support of AREVA NP, for the Jaitapur nuclear park and supply of all equipment under EDFs scope. The Jaitapur nuclear power project, proposing a nuclear power plant of 9900 MW, consists of 6 European Pressurised Reactors (EPR) of 1650 MW each. (indiatoday.intoday.in)

Odisha plea to centre on OTPCL coal block

March 23, 2016. Odisha government requested the Centre to cancel Tentuloi coal block allotted to Odisha Thermal Power Corp Ltd (OTPCL) and allot a suitable coal block in its place. In a letter to Prime Minister Narendra Modi, Chief Minister Naveen Patnaik said OTPCL, a joint venture company of two State Government undertakings - Odisha Hydro Power Corp Ltd (OHPC) and Odisha Mining Corpn Ltd (OMC) - is going to set up a 3200 MW (4X800 MW) coal-based super critical thermal power plant near Kamakhyanager in Dhenkanal district. The Tentuloi coal block was allotted to OTPCL as no other was available at that point of time, he said. The State Government had requested allotment of Chhendipada and Chhendipada-II coal blocks in lieu of Tentuloi to OTPCL, but it is yet to be allocated, he said. He requested the Prime Minister to consider allocating Baitarani East coal block in favour of OTPCL to cater to the requirement of the power project to be set up in Dhenkanal. Alternatively, Karadabahal and Brahmanibil coal blocks, which are also located nearby, can be allotted to OTPCL, he said. (www.newindianexpress.com)

[INTERNATIONAL: OIL & GAS]

Upstream.....

ADNOC 'open' to more partners at onshore oil fields

March 29, 2016. Abu Dhabi National Oil Co. (ADNOC) is willing to accept additional partners at its main onshore fields, the company said, almost a year after awarding less than half the production rights it offered for the deposits in a bidding round. The Persian Gulf emirate, which holds about 6 percent of proven global oil reserves, is investing to boost output capacity to 3.5 million barrels a day of oil by 2017 from about 3 million currently. Total SA of France won a 10 percent stake in Abu Dhabi's onshore joint venture, but other former partners in the project including Exxon Mobil Corp., BP plc and Royal Dutch Shell plc either declined to bid or wouldn't meet ADNOC's terms. ADNOC awarded a combined share of 18 percent of the onshore oil concession to foreign partners last year. That leaves 22 percent of the venture to be awarded to foreign firms if Abu Dhabi decides to maintain its 60 percent interest. Aside from Total, ADNOC's other partners are Inpex Corp of Japan, with a 5 percent stake, and South Korea's GS Energy Corp., with 3 percent. (www.bloomberg.com)

Keppel delivers two rigs for Pemex's \$5 bn Cantarell oil field offshore Mexico

March 28, 2016. Keppel Offshore & Marine's wholly owned subsidiary Keppel FELS has delivered two jackup rigs to Mexican company, Grupo R to support operations at the \$5 bn Cantarell oil field located offshore Mexico. The two rigs, Cantarell I and Cantarell II, will be used to support operations at the Mexico national oil company Pemex's oil field located

100 km off the coast of the Yucatan Peninsula in the Gulf of Mexico. The rigs are part of a contract awarded to Keppel FELS by Grupo R. The contract includes supply of five jackup rigs, featuring KFELS B Class design. Keppel said it also repaired and serviced its 18 rigs installed in Mexico. (explorationanddevelopment.energy-business-review.com)

China's 4th largest oil producer said to cut pay, investment

March 28, 2016. Shaanxi Yanchang Petroleum Group, China's fourth-biggest oil producer, is cutting investments and salaries because of the oil price crash. The company will reduce executive pay by 10 percent until December and will delay paying salaries for six months. It's also delaying half or all salaries and bonuses to non-executive employees for up to six months, as well as cutting spending 20 percent to 24 billion yuan (\$3.7 billion). The crash in oil prices has punished producers from Beijing to London to Houston, forcing companies to slash spending, scale back exploration, write down assets and layoff workers. Brent crude, the global benchmark, has lost more than 60 percent in the past two years. The company produced about 12.4 million metric tons crude (about 91 million barrels) last year, according to SCI International, a Shandong-based researcher. That compares with 410 million barrels for CNOOC Ltd. PetroChina Co. sees output falling the first time in 17 years as it shuts high-cost fields, the company said after the reporting the lowest profit since it began trading publicly. (www.bloomberg.com)

Downstream.....

Total Port Arthur refinery shutting units for work

March 28, 2016. Total SA began shutting a 60,000 barrel per day (bpd) coking unit at the company's 225,500 bpd Port Arthur, Texas, refinery for a planned overhaul that could last up to 60 days. In addition to the coker, a 51,000 bpd vacuum distillation unit, a naphtha hydrotreater and sulfur recovery units will also be shut for the work. (www.reuters.com)

China end-February commercial fuel stocks at 4 year high

March 28, 2016. China's refined fuel stocks at the end of February rose 17.3 percent from the previous month to their highest level in four years, while commercial crude oil stocks were up 1.1 percent. Diesel led the rise with a 38.3-percent increase, to hit its highest level since April 2012, due to reduced industrial and logistics activity over the Lunar New Year period. Gasoline recorded a 7.2 percent drop on busy transportation amid the weeklong holiday. Kerosene, used mostly as aviation fuel, rose 7.5 percent to its highest level since at least the beginning of 2010. The combined stocks of the three fuels reached their highest level since February 2012. National refinery crude throughput in January-February rose 4.6 percent year over year to 10.59 million barrels per day. (www.reuters.com)

Transportation / Trade.....

Gas firms in Israel to push ahead with export efforts

March 28, 2016. The partners in Israel's Leviathan natural gas field will keep working to finalize export deals despite a Supreme Court decision to block a development plan reached with the government. The Leviathan group has signed preliminary, multi-billion export deals with buyers in Egypt and Jordan and is also looking to sell gas to companies in Turkey. (www.reuters.com)

Morocco's Samir seeks supplier of 8 mn barrels of crude oil

March 25, 2016. Morocco's sole refiner, Samir, has launched a tender to buy 8 million barrels of regular Urals or Kirkuk crude oil for delivery from April through June, according to the company. The company said it was seeking to offer a contract to a single supplier for the three months, with the possibility of extending the deal for another three months. The refiner said it was seeking two cargoes of one million barrels each for April, three cargoes of the same size for May and three more for June. (af.reuters.com)

Gas pipeline in focus as Iran leader makes rare trip to Pakistan

March 25, 2016. Iranian President Hassan Rouhani will arrive in Pakistan as the Muslim-majority neighbours seek to revive trade ties held back for years by international sanctions. The two-day trip, the first by an Iranian head of state in 14 years, will feature talks on a long-delayed gas pipeline, a plan to increase trade between ports on the Arabian Sea and a goal to boost electricity sales. Pakistan desperately needs energy, and Iran is looking for buyers. Pakistan, which has traditionally

had close relations with the U.S. and Sunni-majority Saudi Arabia, enforced United Nations-backed economic sanctions designed to deter the nuclear program of largely Shiite Iran. Those restrictions made it difficult to find financial backing for the 800 kilometers of pipeline needed on the Pakistani side. Pakistan currently trades more with rival India than it does with Iran. The two nations last year agreed to boost their bilateral trade to \$5 billion from \$1 billion over five years. (www.bloomberg.com)

Iran's oil storage struggle holds back exports to Europe

March 24, 2016. Iranian oil flows to Europe have begun to pick up from a slow start after sanctions were lifted in January, but trading sources say a lack of access to storage part-owned by Tehran's Gulf Arab rivals now looms large on a list of obstacles. European countries accounted for more than a third of Iran's exports, or 800,000 barrels a day, before the European Union imposed sanctions in 2012 over its nuclear program. Since January, Tehran has sold 11 million barrels to France's Total, 2 million barrels to Spain's Cepsa and 1 million to Russia's Litasco, according to traders and ship-tracking data. Some of these cargoes will not arrive in Europe before mid-April. (www.reuters.com)

Global war for gas market claims \$40 bn LNG casualty

March 24, 2016. The global liquefied natural gas (LNG) boom is turning into a war of attrition amid a glut in the seaborne natural gas market. The conflict reaching from Australia to Qatar to the U.S. claimed a major casualty when Woodside Petroleum Ltd, with partners Royal Dutch Shell Plc and BP Plc, scrapped plans for the \$40 billion Browse LNG project in Australia amid the market slump. More cancellations or delays are expected as current supply kills any incentive to invest, according to BMI Research. Regulators rejected Veresen Inc.'s request to build a terminal in Oregon partly because it couldn't prove there was enough demand. The world's supply of LNG is set to surge over the next five years as projects already under construction in countries including Australia and the U.S. add to an emerging glut, according to analysts including Energy Aspects Ltd and Poten & Partners. The U.S., awash in so much gas that prices there this year touched the lowest levels since the 1990s, sent its first shale exports from Cheniere Energy Inc.'s Sabine Pass terminal in Louisiana in February. The first tanker set sail from Chevron Corp's massive Gorgon LNG terminal project off northwest Australia. Just two years ago, exporting LNG from the U.S. sounded like a lucrative opportunity for shale drillers. Buyers in Northeast Asia were paying up to \$20 per million British thermal units more than spot Henry Hub gas prices. That premium has collapsed, this week trading around \$2.70. (www.bloomberg.com)

China's ENN will buy \$750 mn stake in LNG producer Santos

March 23, 2016. China's ENN Ecological Holdings Co. is buying an 11.7 percent stake in Santos Ltd. for about \$750 million, becoming the largest shareholder in the Australian oil producer and LNG exporter. ENN, one of the country's largest distributors of liquefied natural gas, will be taking over a stake in Santos now owned by Chinese-based private equity firm Hony Capital, the ENN Group said. The deal comes months after Hony purchased a stake in Australia's third-largest oil and gas producer, which had been trying to cut debt after a global plunge in energy prices. The company said it sold 11.3 billion cubic meters of natural gas in 2015, supplying more than 12 million households across China. It distributes about 1.88 million tons of LNG annually, or about a fifth of the country's total LNG trading volume. ENN is building an LNG receiving terminal in Zhoushan, in eastern China's Zhejiang province, to receive imported natural gas. Santos has equity stakes in three liquefied natural gas export projects in Australia and Papua New Guinea. (www.bloomberg.com)

EDF Trading and Angola LNG strike deal for 2016-18 delivery

March 23, 2016. Angola LNG, which is partly owned by Chevron, said it had agreed a flexible sales deal with EDF Trading Ltd to supply liquefied natural gas (LNG). The sales agreement covers multiple cargoes for delivery on an ex-ship basis (DES) from 2016 through to 2018, Angola LNG and EDF Trading said. The Angola LNG export project restarted in January, after a rupture on the flare line forced a shutdown in April 2014. Chevron said the plant was due to resume exports in the second quarter of this year and most of the first production would be sold on the spot market. (www.reuters.com)

US imports of Nigerian crude hit nearly 3 year record high

March 23, 2016. United States (US) imports of Nigerian crude jumped to 559,000 barrels per day (bpd), a weekly record going back to mid-2013 as refining firms turned to imports of West African crude that had previously been displaced by domestic grades during the US shale boom. Nigeria was the fourth largest supplier of foreign crude to the US, displacing

Mexico and also competing with Iraq and Colombia, according to the Energy Information Administration (EIA). Of the 11 cargoes of Nigerian crude that have arrived in the United States this month, eight went to the East Coast, while the remainder were sent to the US Gulf Coast, according to data. Along with typical cargoes of Nigeria's Qua Iboe, Bonga and Forcados, two 500,000 barrel cargoes of Usan medium crude were delivered to Royal Dutch Shell at South Louisiana Port, marking the first time since May 2014 that this crude has entered the US. US shale production in April is expected to fall by 106,000 bpd to 4.87 million bpd, the second-largest monthly decline on record, according to the EIA. (af.reuters.com)

Petroperu expects crude oil pipeline to resume flow in 65 days

March 23, 2016. Petroperu said that it expects its crude oil pipeline in northwestern Peru to resume operations in about 65 days after two ruptures halted the flow of about 5,500 barrels per day. Petroperu president German Velasquez added that the closure of the pipeline had not affected its Talara refinery. The ruptures, in late January and early February, spilled 3,000 barrels of crude in a remote Amazonian region, prompting protests from indigenous communities. The pipeline mainly transported oil from block 192, operated by Pacific Exploration & Production Corp. (www.reuters.com)

Policy / Performance.....

Hedge funds establish near-record bullish bet on rising oil prices

March 29, 2016. Hedge funds and other money managers have amassed a near-record number of bullish bets on increasing oil prices, helping push the main international benchmark well above \$40 per barrel. By the close of business on March 22, money managers held a net long position equivalent to almost 579 million barrels in the three largest crude oil futures and options contracts. Hedge funds have more than doubled their net long position from just 242 million barrels at the end of last year, according to an analysis of data published by regulators and exchanges. The net long position has passed the previous peak of 572 million barrels, set in May 2015, and is closing in on the record of 626 million, set in June 2014, when Islamic State fighters were racing across northern Iraq. Hedge funds have established a record net long position in Brent crude futures and options traded on ICE Futures Europe equivalent to 364 million barrels of oil. At the same time, hedge fund managers have largely closed out their previous record short position in U.S. oil futures and options and started to accumulate long positions instead. Hedge funds have turned very bullish about the outlook for oil prices based on indicators showing that gasoline demand in the United States and India. Investors appear more hopeful the U.S. and global economies will avoid a return to recession in 2016, ensuring that oil consumption keeps increasing. U.S. shale production appears to be falling swiftly based on state production data and the wholesale idling of drilling rigs, which should gradually help tighten the oil market. (www.reuters.com)

China natural gas price cuts seen luring customers from coal

March 28, 2016. China's natural gas demand has been boosted by price cuts aimed at switching users from coal to the cleaner-burning fuel, according to one of the country's biggest gas distributors. ENN Energy Holdings Ltd. has seen its sales rise more than 15 percent in January and February as lower prices encouraged customers to switch, Vice Chairman Cheung Yip Sang said. ENN expects full-year sales to rise 15 percent, following last year's 11.5 percent jump to 11.3 billion cubic meters. President Xi Jinping's government adjusted gas prices twice last year to stimulate demand and shift consumption from coal, which makes up 64 percent of the country's energy mix. The share of natural gas may rise from its current 6 percent, the company said. China's gas demand expanded 3.3 percent in 2015, while coal consumption dropped 3.7 percent, declining a second year, according to the National Bureau of Statistics. The country's LNG imports in the first two months of 2015 jumped more than 14 percent and shipments by pipeline rose 15 percent to a record. The gains by natural gas may be limited, Cheung cautioned, as it's unlikely China will lower prices further because they're already cutting in to earnings by state-owned producers. ENN expects to sell at least 2 billion cubic meters of liquefied natural gas within China this year, up from 1.2 billion in 2015, Cheung said. It's total LNG needs this year, including gas supplied to its own pipeline-distribution unit, may rise to 4 billion cubic meters (roughly 2.84 million tons), which it delivers by truck or injects into pipelines to supply businesses and homes. (www.bloomberg.com)

Israel's HC strikes down govt natural gas plan

March 27, 2016. Israel's High Court (HC) blocked the government's controversial proposal to regulate the natural gas industry, in a dramatic ruling that complicates plans to develop the country's largest field and conclude export deals. The court said that it objected to the so-called stability clause that would have prevented major regulatory changes for 10

years, inserted to encourage investment. It gave the government, which denounced the ruling, a year to revise its plan. The government's failure to craft an approved regulatory framework for the industry since the fields were discovered six years ago has held up development of the largest reserve, Leviathan, impeding export deals and antagonizing investors. Israel's offshore gas fields are held by a small number of companies headed by Texas-based Noble Energy Inc. and Israel's Delek Group Ltd. (www.bloomberg.com)

UK oil tax cut may not give desired benefit amidst low oil prices

March 25, 2016. The tax cuts announced for oil and gas industry in the 2016 UK Budget could reduce the tax outgo from a range of 50–67.5% to 40%, but are expected to give limited benefit to the oil and gas projects amidst the current low oil prices, according to a new analysis by Globaldata. According to the report, 'Challenging Economics Threaten Effectiveness of Latest UK Oil Tax Cut', many oil and gas fields are not taxable due to the low oil prices. The larger than anticipated tax cuts could, however, increase the value of assets up to 20% for new developments and up to 70% for mature fields. The tax revenue from the North Sea operations were negative in the first half of the 2015 and the Office for Budget Responsibility is expecting similar revenues for the next five years. (explorationanddevelopment.energy-business-review.com)

Oman Oil in talks with banks on \$1 bn loan for subsidiary

March 24, 2016. Oman Oil Co, the national petroleum investment company, is seeking a \$1 billion loan from banks for a subsidiary, chief executive Issam al-Zadjali said. Banks in Oman have also been active in the loan market in the past few months, potentially a sign that liquidity is becoming tighter due to low oil prices. The oil industry contributes around 44 percent to Oman's economy, according to government estimates. Oman Oil would use the funds mainly to finance one of its subsidiaries, Oman Oil Company Exploration and Production, including for the development of the country's Khazzan natural gas field, he said. The company signed an agreement with Britain's BP to develop the second phase of Khazzan, taking the estimated investment in the project to \$16 billion. Oman Oil was talking to both local and international banks about the loan, al-Zadjali said. (www.reuters.com)

Russian Economy Minister says sees oil at around \$40/bbl in 2016

March 24, 2016. Russian Economy Minister Alexei Ulyukayev said he thought the price of oil would hover around \$40 per barrel this year and that the government was likely to use that price when it came to revising the state budget. He also said he thought it likely the rouble would rise against the dollar rather than fall. (www.reuters.com)

Croatia will cut residential gas prices by 18 percent in April 2016

March 24, 2016. The energy regulator of Croatia has approved an average 18% cut in gas prices for households as of April 2016, to reflect falling wholesale gas prices on the European market. National oil and gas group INA will also be required to lower the prices of gas produced in Croatia and sold to national power utility HEP. Croatia currently covers more than 2/3 of its gas consumption with its own offshore fields. (www.enerdata.net)

Oil security seen at risk by IEA on 'historic' spending cuts

March 23, 2016. An oil shock may be lurking around the corner as the price bust has hammered investment in future supply, according to the International Energy Agency (IEA). "Historic" investment cuts taking place now increase the possibility of oil-security surprises in the "not-too-distant" future, Neil Atkinson, head of the IEA's Oil Industry and Markets Division, said. About \$300 billion is needed to sustain the current level of production, and nations including the U.S., Canada, Brazil, and Mexico are facing difficulty in keeping up investments, he said. Companies from ConocoPhillips to Chevron Corp. and BP plc have canceled more than \$100 billion in investments, laid off tens of thousands of workers, slashed dividends and sold assets as oil sank below \$30 a barrel to a 12-year low. With crude rebounding since mid-February to near \$41, Atkinson said the worst may be over for prices as they have a floor "for the time being." The Organization of Petroleum Exporting Countries (OPEC) and other producers including Russia plan to meet in Doha next month to discuss limiting output to reduce a global oversupply. The oil market will be balanced in 2017 and stockpiles will fall from 2018 to 2021, Atkinson said. Global demand will grow 1.2 percent a year in the five years to 2021, compared with 1.7 percent annual growth in 2009 to 2015, he said. The risk of supply outages such as those in Nigeria and Iraq are "episodic" events due to political instability, something that may also affect other countries around the world as a result of low oil prices, according to Atkinson. (www.bloomberg.com)

[INTERNATIONAL: POWER]

Generation.....

Construction of Indonesian coal-fired power plant to start

March 26, 2016. The construction of a \$4 billion, 2,000 MW coal-fired power station in Indonesia will begin on April 1 after years of delay as land acquisitions are finally complete. PT Bhimasena Power Indonesia, a joint venture set up by Indonesian coal miner PT Adaro Energy Tbk and Japan's Itochu Corporation and Electric Power Development Co. Ltd, will build and operate the Batang plant in Central Java. Indonesia's Supreme Court has thrown out a landholders' lawsuit on technical grounds, paving the way for the government to take over the remaining land for the project. The Batang plant was among a handful of new infrastructure projects that Indonesia hoped to finally get off the ground to ease power shortages in the Southeast Asian nation. (www.reuters.com)

ScottishPower stops Longannet 2.4 GW coal-fired power plant

March 25, 2016. ScottishPower, the British subsidiary of Spanish power group Iberdrola, closed its 2,260 MW Longannet coal-fired power plant on 24 March 2016, after 46 years of operation. National Grid had decided not to award the plant a contract for grid balancing services. The power plant has produced more than 400 TWh of electricity. It was the second largest coal-fired power plant in the United Kingdom and the third largest in Europe. (www.enerdata.net)

Transmission / Distribution / Trade...

Japan's power market opening challenges entrenched players

March 29, 2016. Japan's 8.1 trillion yen (\$71.6 billion) power market will become fully open to competition on April 1 after being dominated for more than 50 years by 10 regional monopolies. The following is a short question and answer on the shakeup. Japan is liberalizing its low-voltage electricity market on April 1, allowing roughly 85 million households and small businesses -- representing about 38 percent of the market -- to choose electricity providers for the first time. In the 2000s, the nation reformed retail competition for high-voltage customers, or roughly 62 percent of the entire electricity market. More than 250 companies, including mobile carrier SoftBank Group Corp., city gas retailer Tokyo Gas Co. and oil refiner JX Holdings Inc., will be able to sell electricity from April 1. (www.bloomberg.com)

Turkmenistan builds new power transmission line towards Afghanistan

March 28, 2016. A 146-kilometer Yoloten-Tahtabazar power transmission line has been constructed in Turkmenistan towards Afghanistan, the Turkmen government said. A scheme of the route of the new transmission line was delivered to Turkmen President Gurbanguly Berdimuhamedov during a meeting of the country's Cabinet of Ministers. After its commissioning, it will be possible to ensure a higher level of reliable energy supply not only for local consumers, but also for those in neighbouring Afghanistan. Turkmenistan supplies electricity to Afghanistan on favorable terms. The electricity production hit 22.5 billion kilowatt-hours (kWh) in Turkmenistan in 2015. The export hit 3.2 billion kWh. At present, the work is underway to expand the export of electricity to Afghanistan, Iran and Turkey. The possibilities of its transfer to Tajikistan, Kazakhstan, Pakistan and the Caucasian countries are being considered. Turkmenistan plans to bring the electricity production to 35.5 billion kWh by 2030. (en.trend.az)

Policy / Performance.....

Japan's NRA approves Ikata-3 nuclear plant safety upgrades

March 25, 2016. The Japanese Nuclear Regulation Authority (NRA) has approved the construction plan submitted by Japanese power utility Shikoku Electric for strengthening the third unit of its Ikata nuclear power plant in Ehime prefecture. Shikoku Electric can now request the NRA carry out final pre-operational safety inspections, a new step toward resuming commercial operation. The 846 MW reactor, commissioned in 1994, was idled in 2011 after the Fukushima disaster. Shikoku Electric received a positive signal to restart the reactor when the Nuclear Regulation Authority (NRA) declared in July 2015 that the reactor met strengthened safety standards. In October 2015, the Ehime Prefecture in Japan gave its approval for the restart of Ikata-3 and Shikoku Electric submitted its construction plan to the NRA, which identified a number of revisions required for the application review. The new construction plan included those revisions. (www.enerdata.net)

China to halt construction on coal-fired power plants in 15 regions

March 24, 2016. China will stop the construction of coal-fired power plants in 15 regions as part of its efforts to tackle a capacity glut in the sector, the country's energy regulator said. The regulators had halted the construction of coal-fired plants in regions where capacity was already in surplus, including the major coal producing centers of Inner Mongolia, Shanxi and Shaanxi. The National Energy Administration (NEA) said that the report was correct, but he did not provide any further details. The rapid expansion of China's coal-fired power capacity, together with a slowdown in demand growth, has saddled the sector with its lowest utilization rates since 1978, the NEA said. Environmental group Greenpeace said the rules, if fully implemented, could involve up to 250 power projects with a total of 170 GW in capacity, according to initial estimates. China's total generation capacity reached 1,485.8 GW by the end of February, up 11.8 percent year on year, according to the latest figures. Thermal power, which mostly consists of coal-fired capacity, rose 9.4 percent on the year to 1,003.8 GW. China aims to raise the share of non-fossil fuels to 15 percent of total primary energy by 2020, up from 12 percent at the end of last year. (www.reuters.com)

[RENEWABLE ENERGY / CLIMATE CHANGE TRENDS]

National.....

Torrent inks pact to develop 197.4 MW wind power project

March 29, 2016. The city-based Torrent Power Ltd has entered into a contract with a leading group manufacturing wind turbine generators for developing 197.40 MW of wind power project in Gujarat. In order to fulfil its renewable power purchase obligation, Torrent Power forayed into renewable energy generation in the year 2012, by commissioning the 49.60 MW wind power project at Lalpur, Jamnagar. Subsequently, the company commissioned the 51 MW Solar Power Project at Charanka Solar Park, Gujarat in year 2015. Torrent Power is also implementing the 81 MW solar power project at Kamrej, Surat and the 136.80 MW wind power project in Rajkot and Surendranagar districts. (indianexpress.com)

UP solar projects find bidders at ₹ 4.43 per kilowatt hour

March 29, 2016. The Solar Energy Corporation of India's (SECI) latest tender for solar plants in Uttar Pradesh (UP), setting a base tariff of ₹ 4.43 per kilowatt hour, has drawn bidders even as many in the trade have deemed the price too aggressive. Rattan India Solar 2 Ltd won 50 MW at the Allahabad solar park, while the France-based SolaireDirect won 75 MW at the Mirzapur park, both accepting the tariff of ₹ 4.43 per kilowatt hour. Both will be eligible for viability gap funding - ₹ 75 lakh per MW at the Allahabad park and ₹ 74.3 lakh per MW at the Mirzapur park. With solar prices rapidly falling across different auctions in the last few months, SECI lowered its base price from ₹ 5.45 per kilowatt hour to ₹ 4.43 per kilowatt hour two months ago. While it has floated one successful tender at this price in Maharashtra, many felt that in eastern UP, with its lower radiation, such a price may not be viable. The UP tender was originally for 440 MW, but the remaining 315 MW will have to be retendered, as grid connectivity emerged as a problem at the other two solar parks in the state - at Jalaun and Kanpur - where the plants were to be located. As a result, there were no bidders for either the 265 MW at Jalaun or 50 MW in Kanpur. (energy.economictimes.indiatimes.com)

Two Andhra villages to run completely on solar power

March 28, 2016. In a first of its kind of green development initiative, two Andhra villages - Toorputallu and Pedhamyanavanilanka - will be electrified completely on solar power from this year. A 2 MW solar power plant will be developed by a private entity and the power generated by the plant will be bought by Andhra Pradesh discom APEPDCL. As per the proposal, the district administration has earmarked the required land and APEPDCL has consented to buy power from the developer. The solar plant will be completed by August 2016. The plant would also generate substantial income for the village - 60 paise per unit. The Sansad Aadarsh Gram Yojna (SAGY) was launched by Prime Minister Narendra Modi. It is an ambitious village development project under which each Member of Parliament will take the responsibility of developing physical and institutional infrastructure in three villages by 2019. (indiatoday.intoday.in)

ADB, USAID to assist India in developing clean energy projects

March 28, 2016. Asian Development Bank (ADB) and the United States Agency for International Development (USAID) will assist India in developing the clean energy infrastructure by collaborating on design and development of public private partnership (PPP) investment models for solar parks. ADB and the USAID signed a Memorandum of Understanding (MoU)

to collaborate on supporting India's ambitious expansion plans for clean energy infrastructure, ADB said. Under the terms of the MoU, USAID will align components of their technical assistance with ADB's current and planned investments in renewable energy. ADB is currently financing the development of power evacuation infrastructure for solar parks in Gujarat and Rajasthan. (timesofindia.indiatimes.com)

Govt to rate mines based on sustainable development practices

March 28, 2016. Ministry of Mines has proposed a rating system for mining leases in a bid to ensure that firms follow sustainable development practices, which includes addressing social impact of resettlement and rehabilitation, among others. Sustainable Development Framework (SDF) provides guidance to mining companies to improve their performance not only with regard to environmental and social aspects, but also (provides) a common benchmark against which operations can be evaluated in terms of comparative performance on sustainable development norms. The evaluation would be based on management of impact on the mining level by carrying out scientific and efficient mining, addressing social impacts of resettlement and rehabilitation requirements for taking up mining activities, the Ministry said. A provisional 'Star Rating' will be awarded to the mining lease after due submission of their practices based on SDF and the confirmation of star rating would be given upon the due verification in the next inspection by Indian Bureau of Mines (IBM). (economictimes.indiatimes.com)

Electric vehicles for all by 2030: Goyal

March 26, 2016. Come 2030, and every car user in the country could have an electric vehicle. That's the goal that the government is working towards, minister for power, coal, new and renewable energy Piyush Goyal said. Under the plan, the vehicles will be given without an upfront payment and will be paid for by users over a period of time from the savings made on fuel, he said. The idea is inspired by the success of the government's campaign to promote energy-efficient LED bulbs, which has seen costs falling by 80% over 18 months to ₹ 99 per bulb now. Power utilities distribute these bulbs and consumers pay for them over a period of time from the savings in their power bills. (www.livemint.com)

India, China led investments in renewable energy in 2015: UN

March 26, 2016. India and China led developing countries in investments made in renewable energy in 2015, when for the first time commitments in solar, wind and other renewables capacity by emerging economies surpassed those by wealthy nations, a UN-backed report has said. The report 'Global Trends in Renewable Energy Investment 2016' by the UN Environment Programme said the developing world including China, India and Brazil committed a total of \$156 billion in new renewables capacity last year, up 19 percent on 2014. Investments by developed countries were down eight percent in 2015 to \$130 billion. The year 2015 was the first time when investment in renewables in developing countries outweighed that in developed economies, the report said. A large part of the record-breaking investment in developing countries took place in China, which lifted its investment by 17 percent to USD 102.9 billion, more than a third of global commitments. India was also among the top 10 investing countries in renewable energy, with its commitments rising 22 percent to \$ 10.2 billion. The US, Japan, UK Brazil, South Africa, Mexico and Chile all made it to the top 10 investing countries in 2015. India was also an important focus of new—build renewable energy financing last year, with a total of \$9.1 billion raised — the most since 2011, and an increase of 34 percent on 2014. Solar investment surpassed commitments to the country's wind sector for the first time. Indian renewable energy companies attracted \$548 million in venture capital/PE funding in 2015, more than all of Europe (\$301 million) and second only to the US. The report attributed this rise to the \$230 million investment in Ostro and a \$165 million private equity investment in Welspun, a New Delhi-based wind developer. The report said that coal and gas-fired electricity generation last year drew less than half the record investment made in solar, wind and other renewables capacity. (www.thehindubusinessline.com)

Global.....

WTO rules for some Argentina claims in EU anti-dumping biodiesel duty row

March 29, 2016. The World Trade Organization (WTO) ruled in favor of several claims by Argentina against anti-dumping duties imposed on its biodiesel imports by the European Union (EU), but said the EU regulation at the heart of the dispute did not violate WTO rules. The ruling by a WTO dispute panel in the case, begun in late 2013, called on the EU to bring its measures into conformity. Both sides have 60 days to appeal. A separate case brought by Indonesia against EU anti-dumping duties on imports of biodiesel from Jakarta is pending at the Geneva-based trade watchdog. The WTO panel

rejected Argentina's claim that a central article of the EU regulation "as such" violated the WTO's anti-dumping agreement, but upheld other claims that the EU had acted inconsistently with the pact. (www.reuters.com)

Amec Foster to build biomass dust combustion plant in Finland

March 28, 2016. Finnish utility company Seinäjoen Energia has awarded a contract to Amec Foster Wheeler to build a biomass dust combustion plant in the country. The scope of the contract also includes storage silos and handling equipment for biomass fuels, flue gas cleaning systems, stack, modifications to the boiler house, electrification, instrumentation and automation installed and commissioned. The plant is scheduled to be delivered and commissioned by Seinäjoen Energia in December 2016. Designed to meet the emission requirements of the new environmental permit, the plant will be operated as back-up for a peak load district heating plant. Amec Foster said that that the heavy fuel oil combustion will be replaced with biomass based fuels, including wood pellets, wood briquette, bark and forest residue pellets, dried forest residues, agro fuel pellets, peat pellets and coal as a reserve fuel. (biofuelsandbiomass.energy-business-review.com)

China plans to reach 143 GW of PV capacity by 2020

March 24, 2016. The National Energy Administration (NEA) of China plans to triple the installed solar PV capacity of the country over the next five years, from 37.1 GW in 2015 to 143 GW in 2020, and to accelerate solar PV installations to add 15 to 20 GW of capacity per year by this date. To help achieve this ambitious target, China plan to invest US\$368 bn in ultra-high voltage grids, smart grid and distribution grids. China installed 15.1 GW of solar capacity in 2015, raising its installed solar capacity to more than 43 GW in 2015, including 37.1 GW of PV capacity and 6.1 GW of distributed installations. (www.enerdata.net)

Exxon Mobil must allow climate change vote: US SEC

March 24, 2016. The United States (US) Securities and Exchange Commission (SEC) has ruled Exxon Mobil Corp must include a climate change resolution on its annual shareholder proxy, a defeat for the world's largest publicly traded oil producer, which had argued it already provides adequate carbon disclosures. In a letter to Exxon, the SEC said the oil producer cannot keep a proposal spearheaded by New York state's comptroller from a full shareholder vote at the company's annual meeting in May. If approved, the proposal would force Exxon to outline specific risks that climate change or legislation designed to curb it could pose to its ability to operate profitably. (www.reuters.com)

US, Argentina take steps to tackle climate change

March 23, 2016. United States (US) President Barack Obama and Argentina's President Mauricio Macri agreed to take joint steps to fight climate change including working to cut carbon emissions from air flights and integrating solar and wind power into electricity grids. Obama is visiting Argentina for two days to reset diplomatic relations and strengthen trade ties, marking a rapprochement after more than a decade of sour relations. The two countries committed to signing last year's Paris global climate agreement as soon as feasible and Argentina plans to enhance its contribution under the plan, a fact sheet on the agreement said. United Nations Secretary-General Ban Ki-moon has invited world leaders to sign the Paris agreement in New York on April 22. Obama has said the United States remains committed to carrying out its own national climate strategy, despite a Supreme Court ruling last month that froze a key regulation to curb power plant emissions. (www.reuters.com)

Australia launches \$762 mn fund to invest in emerging clean energy technologies

March 23, 2016. The Australian Government has launched A\$1 bn (\$762 mn) Clean Energy Innovation Fund (CEIF) to invest in clean and renewable technologies for commercial deployment. Expected to create jobs, the fund will be jointly managed by the Clean Energy Finance (CEFC) and the Australian Renewable Energy Agency (ARENA). The Clean Energy Innovation Fund will target projects including large-scale solar with storage, off-shore energy, biofuels and smart grids. Established from within the CEFC's \$10 bn allocation, the fund is expected to help in country's aim to reduce emissions by 26% to 28% by 2030. The fund will invest \$100 mn per year for ten years starting in July 2016 in clean energy technologies including renewable energy, energy efficiency and low emissions technologies. (solar.energy-business-review.com)

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