ORF ENERGY NEWS MONITOR

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The call for feed in tariff route for solar projects illustrates the fact that solar projects feed off the grid!

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[REDUCING POLLUTION IN DELHI: NEITHER ODD NOR EVEN]

"It is a complex task to determine the level of pollution in Delhi. It is affected by various independent factors such as weather conditions, speed of wind, time of measurement and polluting activities in neighbouring states. There is no common consensus on methodology to measure the level of pollutions. Odd-even formula may or may not have decreased pollution…"

[*RENEWABLE ENERGY / CLIMATE CHANGE TRENDS*]

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Upstream.....

Downstream.....

Transportation / Trade.....

- Iran will inaugurate new gas pipeline to the Iraqi border
- Chevron begins shipping first cargo from Gorgon project in Australia
- Kenya, Uganda discuss rival routes for oil export pipeline
- PDVSA to receive US crude cargo from PetroChina
- Petrobras mulls giving up control of fuel distribution unit
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- Iran's January oil exports hit 22 month high
- Saudi oil exports rise to 7.8 mn bpd in January
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- Denmark and Poland consider gas interconnection project
- Japan to import US crude in May

Policy / Performance.....

- Iraq seeks financial agreement with Kurds before pumping crude to Turkey
- Qatar invites OPEC members and other producers to April oil meeting
- World oil market still oversupplied: Russian Central Bank Governor
- Mexico to proceed with auction round for shale fields this year
- Saudi Arabia will join April oil producer meeting in Doha
- Norway launches oil exploration round in mature areas with Arctic focus
- Indonesian President nears decision on Inpex's LNG plant
- Britain to cut taxes for North Sea oil producers by $1.4 bn

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Generation.....

- Almaraz nuclear power plant seeks to renew operation license
- Total wants to branch out into power generation
- Tanzania has awarded to MHPS an order for 240 MW CCGT project
- Chinese nuclear plant moves closer to start: Westinghouse
- Petrovietnam plans to build two 700 MW power plants

Transmission / Distribution / Trade.....

- Coal-laden cargo sinks in Sundarbans
- Two Czech firms bid for Vattenfall's German coal and power business
- Electricity sales dipped in the United States in 2015

Policy / Performance.....

- Nigeria targets 4 GW of nuclear power capacity
- EDF said to plan approval of Hinkley Point nuclear plant by May
- Polish utilities ready to invest $388 mn in state coal mine

[RENEWABLE ENERGY / CLIMATE CHANGE TRENDS]

NATIONAL.....

- ACME wins 75 MW project in Jharkhand
- Electric buses daily earn 82 percent more profit than diesel vehicles
- India to get $421 mn from US for solar, internet projects
- India should adopt renewables at faster pace: Al Gore
- Hindustan Cleanenergy calls for FiT route for solar projects
- Pavagada solar park to be operational in 2 yrs
- Solar tariffs hit a new low in Rajasthan
- Govt reacts in fits and starts to Paris agreement

GLOBAL.....

- China to more than triple solar power capacity in 5 yrs
- Duke Energy to produce power using waste from chickens and pigs
- Statoil launches pilot battery storage for offshore wind project
- BHP Billiton announces plans for environmental management in Western Australia
- EDF sells 50 percent stake in two US wind parks to BlackRock
- Global emissions stable for second year as economy expands
- UK plans $1.1 bn to support new clean-energy technologies

COMMENTS.....

Reducing Pollution in Delhi: Neither odd nor even

Neeraj Tiwari, Observer Research Foundation

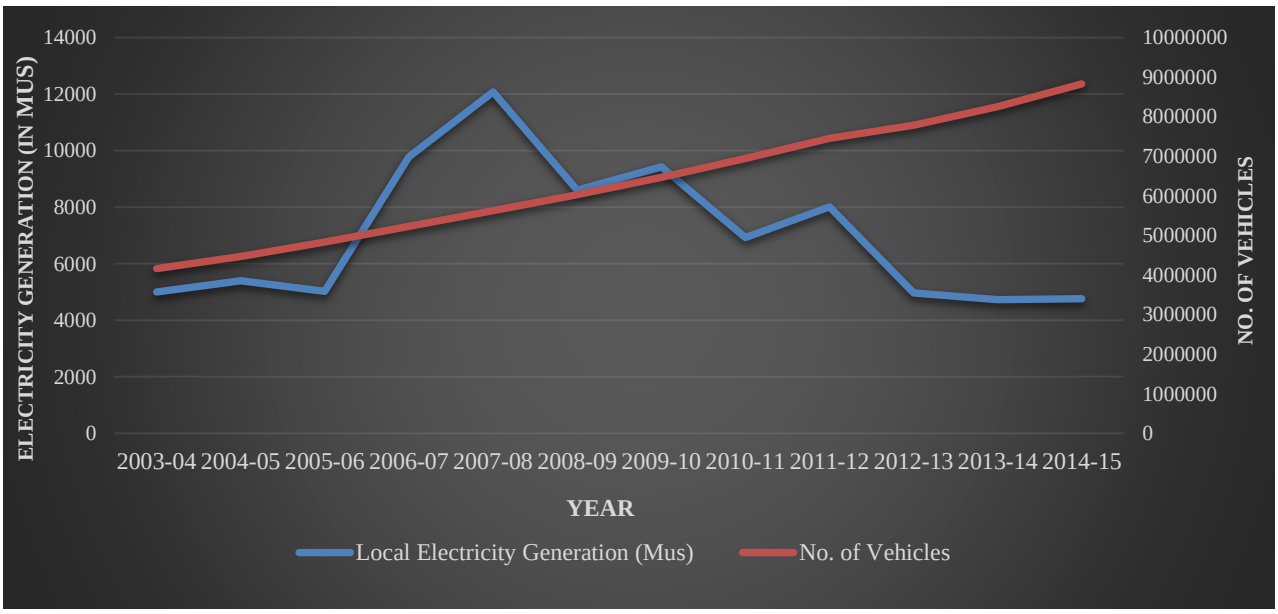
Franklin D. Roosevelt rightly said "It is common sense to take a method and try it. If it fails, admit it frankly and try another. But above all, try something." Following Roosevelt's advice, the Delhi government did try out a solution for 15 days in January 2016 when Delhi was choking because of high level of suspended particle matter (SPM) in the air. The method chosen was rationing traffic based on whether the last digit on the number plates of personal vehicles (with some exclusions) was odd or even. Now it is time to assess the outcome and learn from it. Since the end of the trail period, a number of assessments have come on whether Delhi's 'odd – even' scheme was a success. As of now it is safe to say that we do not know yet. It is a complex task to determine the level of pollution in Delhi. It is affected by various independent factors such as weather conditions, speed of wind, time of measurement and polluting activities in neighbouring states. There is no common consensus on methodology to measure the level of pollutions. Odd-even formula may or may not have decreased pollution but one thing is certain: it did decreased the number of cars in Delhi and decongest its roads.

Power scenario after odd even

Even though the decision was taken in a haste and even if the move failed to achieve its primary objective of reducing pollution completely, we must give credit to the fact that for the first time in recent years the blame for pollution in Delhi has been shifted from power plants to personal vehicles. For many years the power sector was being targeted as the only source of pollution in the capital. Even today a number of civil society movements are fixated on blaming the power sector as the source of pollution. Many are raising demands to shut down the Coal power plants in Delhi.

According to 1997 white paper on pollution 67% emission are from vehicles and 13% emissions are from thermal power plants. Currently Delhi is adding 1400 vehicles per day which contributes 70% to the total air pollution.

Change in number of cars vs change in the electricity generation in Delhi



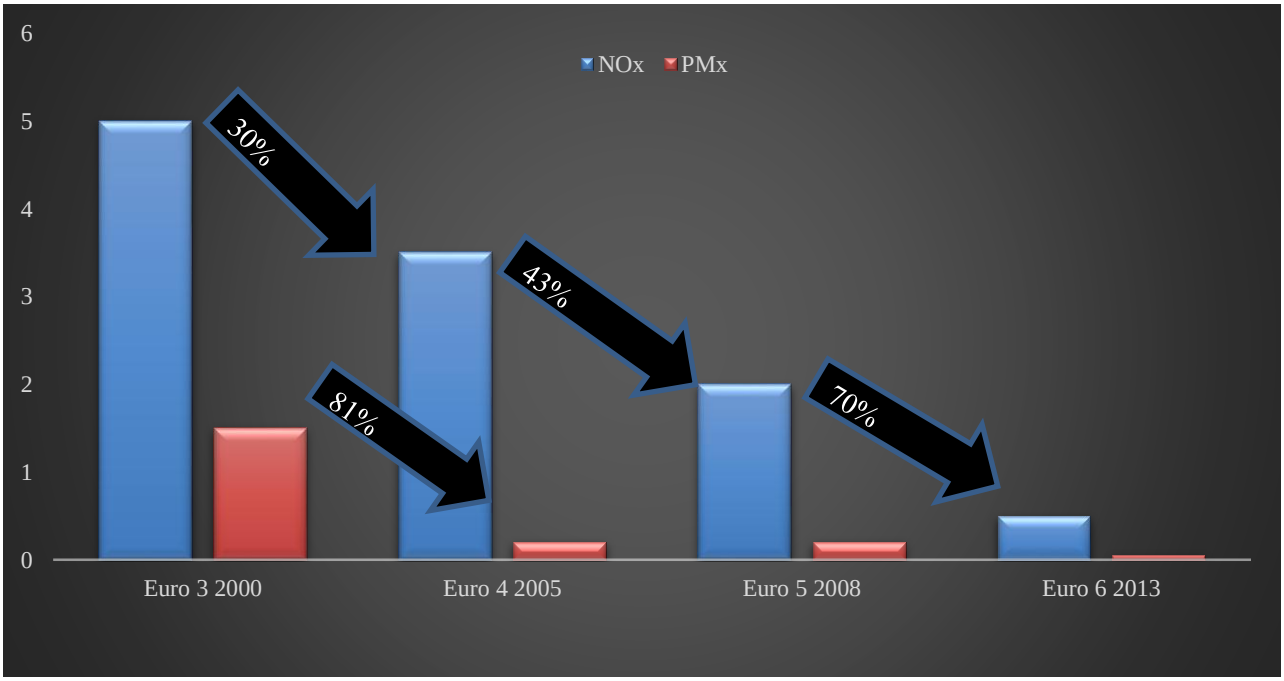
Source: Economic Survey of Delhi, 2014-15 and Delhi Statistical Handbook, 2015

As shown in the chart since 2003 – 04 the number of vehicles has increased by 112 % whereas the power generation from local power plants has fallen by 4% (60% since 2007-08). Delhi has only two coal power plants and often generation from Rajghat is zero or even negative (consumes power for maintenance but produces nothing). Badarpur and Rajghat power plants are the only reliable power plants within the Delhi region. Every year the demand for electricity increases in summers and demands for new power plants is made. In fact gas based power plants were set up for that purpose but now they are also lying idle because of lack of cheap gas. Last year the Delhi government also bid for pithead power plants because it wanted to address the issue of shortage of power. The Delhi government policy responses appear to be reactions to media pitches. The Delhi government needs to make policy based on considered thought that are firm and consistent rather than policy based on popular demand.

New emission standards for vehicles

In Europe stringent emission standards were one of the most successful policies to reduce pollution. Europe is currently having Euro 6 standards which have reduced NOx pollution by approximately 70%. Currently barely 20 Indian cities follow Euro 4 emission standards for new vehicles, while others are still following Euro3. Euro 4 is seven years behind European standards and Euro 3 is behind by 12 years. In Europe adopting Euro 6 has reduced NOx pollution level by 85% as compared to Euro 4 level. If the government is really serious about reducing vehicular pollution then adopting stringent emission standards alone could reduce pollution drastically like it did in Europe.

The drop in the pollution level of NOx and PMx with changing euro standards



Source: Dieselnet.com

Will Delhi do it again?

The Delhi government has already announced that the odd-even rule will come back in April for another 15 days. Whether it will be successful in decongesting roads as it did the first time is not certain. As the frequency of odd even rule is increased there is high probability that a section of affluent car owners will buy a second car to beat the system. Owning of second car gives high comfort at low cost. There is a need to increase the upfront and overall cost of owning a car. A car not only causes pollution but also occupies the high value real estate when it moves and when it is parked. The Government needs to charge for the real estate occupied by the cars. There should be an access fee for entry and use in congested cities and also heavy parking fee in publicly owned spaces. In Delhi every car owner receives a huge subsidy in the form of free parking even on

pavements meant for pedestrians. The vehicle owner must be asked to purchase the plot used for parking his vehicle next to his house or given the option of low cost parking next to a bus-stop or metro station. This will reduce the incentive for using personal vehicles and favour public transport. In order to reduce the transaction cost in collecting a fee for car usage every day a lump-sum tax may be collected upfront based on average car use patterns in Delhi. The policy that will discourage the use of cars and make it a costly and uncomfortable affair every day would be more effective in decreasing the number of vehicles and pollution caused by the vehicles.

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Views are those of the author

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READER'S VIEW……

on article 'Will Renewable Energy Make Indian Power Utilities Non-renewable? (Part II)' Volume XII, Issue 40, 18 March 2016

While the article has effectively discussed the problems with some of the supply models being used now, it would have been appropriate to dwell on the solution/s also. The article seem to indicate that the coal power should continue to have predominant role in India's power sector, and the increased share of REs will not be desirable. If this is the contention, it would be useful also to address the social, environmental and economic issues associated with the conventional technology power production. Is the concept of clean and inexhaustible supply of coal and petroleum products still holds good even after innumerable number of reports to the contrary; such as SR 5 of IPCC and World Bank reports on India's economy? Is it not necessary to consider these issues from the overall welfare perspective of our society than to consider only the technological and financial issues?

The article also seems to advocate the usage of DG sets (diesel powered generation) micro-grids for village electrification. How are we going to ensure continuous supply of vast quantities of diesel required at the national level, and how are we going to address the foreign exchange outflow issue? Will the environmental issues associated with the DG sets acceptable to the poor villagers? Will they be able to operate and maintain them well? SPV systems, which are being used now in many villages, have no health issues and the O&M issues are minimum to the villagers.

The issue of financial losses of DISCOMS has been there for decades, even before Solar power was considered for villages (i.e even when coal power was considered as the only option). Hence the RE or Solar power cannot be seen as the cause of this problem. The problems the article has raised are relevant to non-RE powered scenario also, and hence have to be satisfactorily addressed anyway. In this direction the power sector must give adequate emphasis on highest possible efficiency at all levels, DSM and energy conservation.

Shall we not try to find a solution as to how to make REs work satisfactorily for us, instead of finding fault with REs themselves? Additionally, what alternatives do you advocate, if we do not consider REs for our future?

Recently, along with about 30 energy activists, I had the opportunity of visiting a village (Dharnai) near Gaya, where SPV powered micro-grid is providing electricity for the first time to those villagers. The model is reported to be self-supported by locals, except for the initial capital cost, and is known to be operating satisfactorily. For such villages in a state like Bihar, which has no coal power production capacity, nothing else would have provided even the basic electricity for many more years.

There are many such cases where micro-grids powered by bio-energy, solar and micro-hydel are reported to be functioning satisfactorily. Of course these villagers do not have access to unlimited amounts of electricity (as the article seems to be alluding to the urban elites), but right now the basic needs of the villagers are met. Even with such rudimentary type of micro-grids villagers are finding positive changes to their lives (similar to the present urban elites when they got electricity for the first time many decades ago). Depending on their economic needs these micro-grids can be further strengthened. The government of Bihar has appreciated this model and is known to be replicating it in other villages.

No one can say that all the problems in power sector have been solved with RE powered micro-grid concept, as at present, but such a model has to be improved considerably to make it sustainable and satisfactory for the needs of not only our villagers but also for the urban areas. It requires active and wiling participation from all the stake holders for many years to come.

The present system of large integrated power networks based on large size conventional power plants, has taken many decades (more than 100 years) to reach the present level of maturity, and is still evolving. But it has failed to meet the legitimate demand for electricity of all sections of our society even after nearly 7 decades

of independence. Hence, we shall look for a different paradigm, for which we have to give the RE powered micro-grids few decades of time to mature. Also there is no alternative but for the REs, as is being acknowledged by 195 countries in COP21. In this context the news item ("India should adopt renewables at faster pace: Al Gore"), along with many credible international reports, should be of huge relevance.

Shankar Sharma

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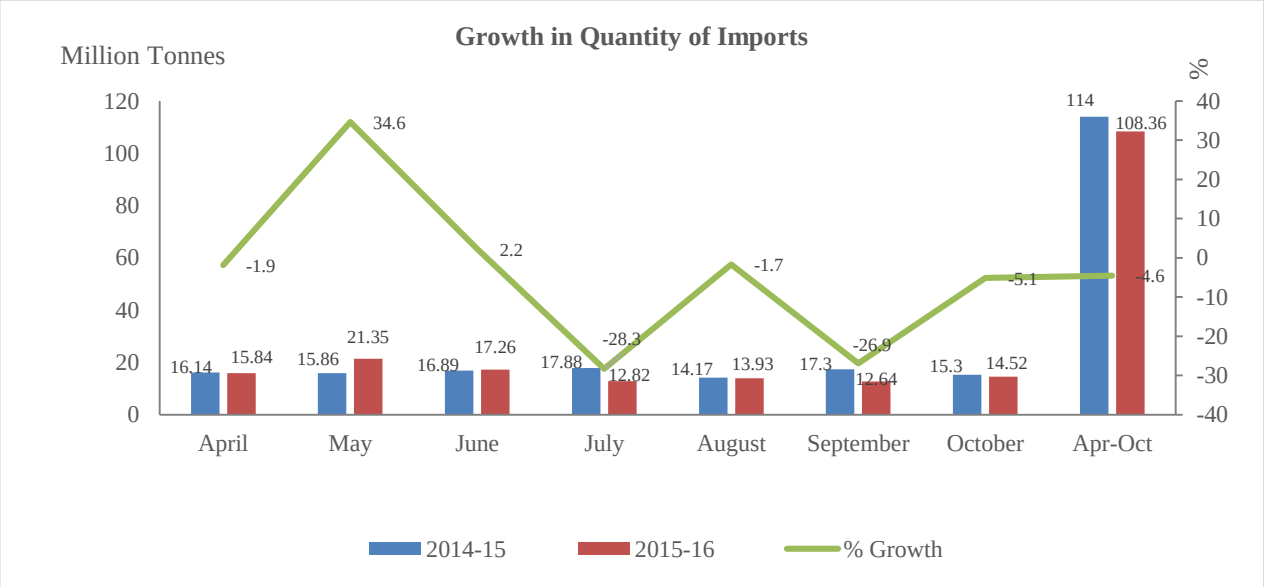
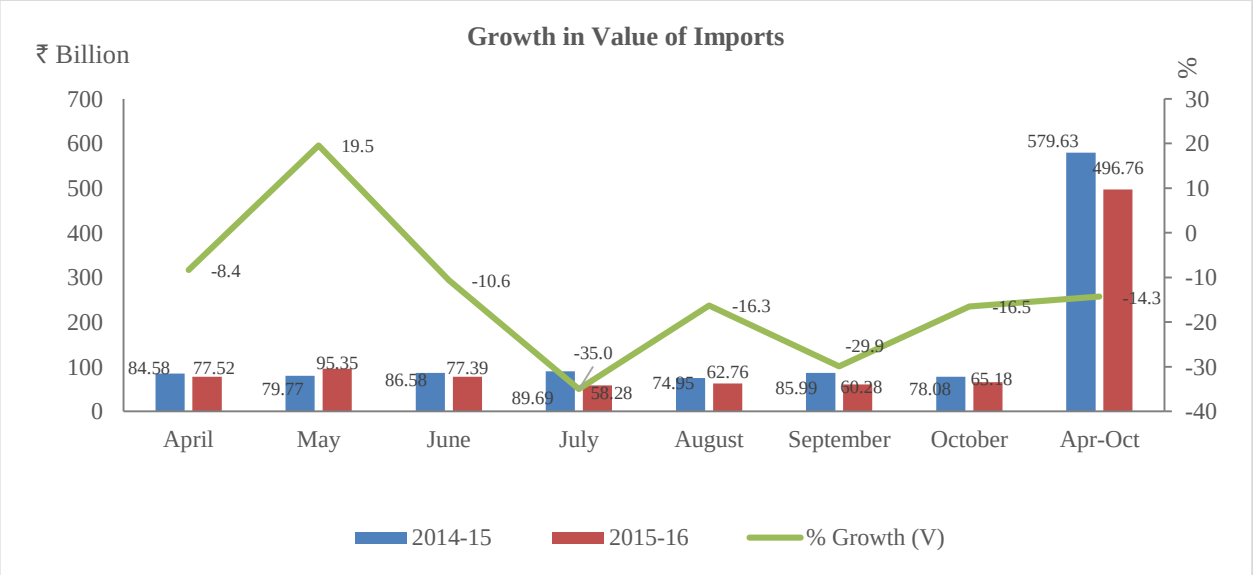
India's Coal Production and Imports

Akhilesh Sati, Observer Research Foundation

Month	Production (Million Tonnes)		
	2014-15	2015-16	% Growth
April	37.517	41.51	10.6
May	36.262	40.996	13.1
June	34.539	38.842	12.5
July	33.015	34.837	5.5
August	34.509	36.178	4.8
September	34.898	37.183	6.5
October	40.203	44.364	10.3
November	44.456	47.472	6.8

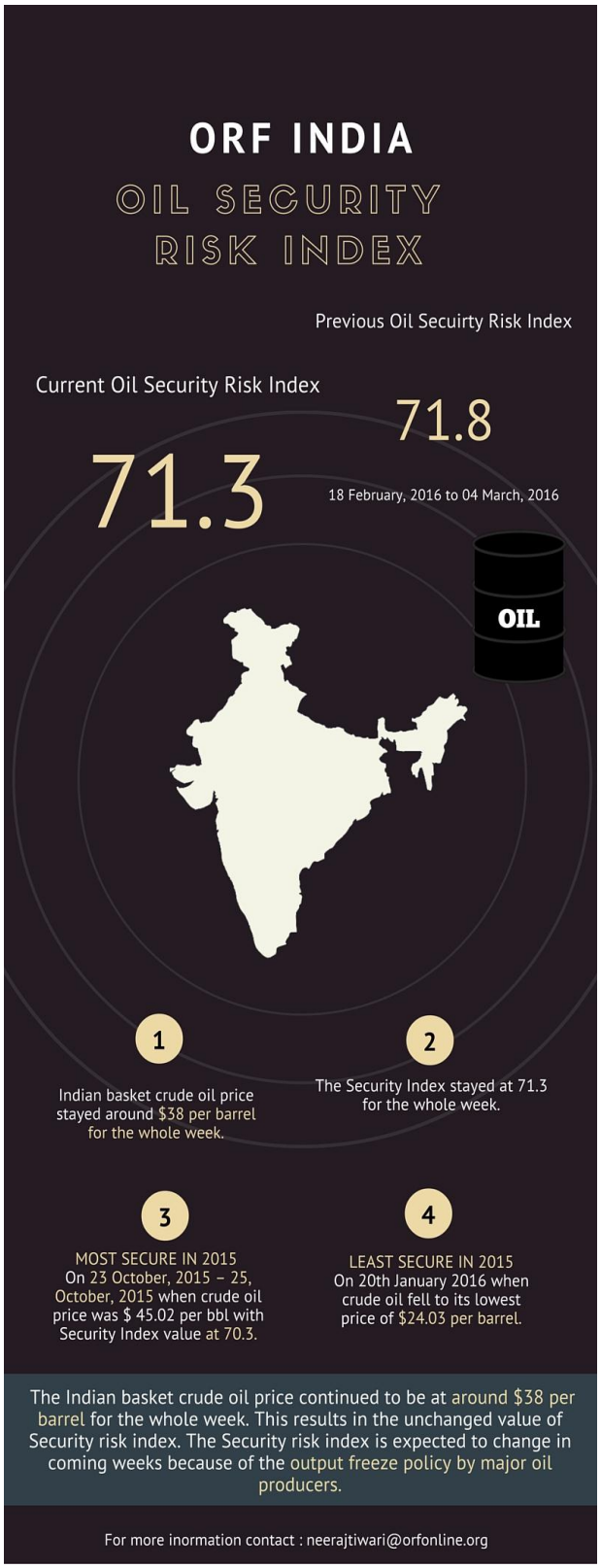


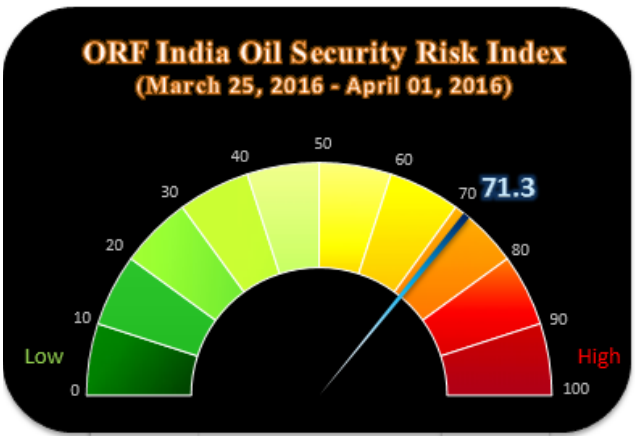


Source: Press Information Bureau

Indian basket crude oil price stable around $38 per barrel

Neeraj Tiwari, Observer Research Foundation





What is Oil Supply Security Risk Index?

The Oil Supply Security Index aims to capture oil security of India using a simple quantitative methodology and represent the outcome (oil security index) in the form of a single number.

The index aims to offer a simple gauge of India's access to oil measured in terms of physical, financial, environmental, political and other parameters.

The index used here can take values from 0 to 100. Higher the score higher is the risk.

The quantitative risk index does not claim high degree of accuracy. As qualitative factors such as geopolitical risk are captured in quantitative form there is an element of simplification and generalisation that compromises on accuracy. The fact that only secondary sources of data are used also compromises on the level of accuracy. The simplified quantitative index is designed to serve only as a reference to judge shifts or changes in risk.

NEWS BRIEF

[NATIONAL: OIL & GAS]

Upstream.....

ONGC eyes tie-up with foreign service providers to boost output

March 17, 2016. Oil and Natural Gas Corp Ltd (ONGC) plans to enter into partnerships with overseas oilfield service providers to boost output from ageing oil and gas fields, its chairman D.K. Sarraf said. Under the terms of the tie-up being discussed, firms such as Schlumberger NV and Halliburton Co will invest capital and share technical expertise in stagnant but producing ONGC hydrocarbon fields, he said. If the foreign partners are able to increase output, they will be paid a pre-determined fee on each additional barrel of crude oil produced, making it the first time India has adopted this kind of agreement, he said. ONGC, which accounts for half of India's total oil and gas production, has often been criticised by investors for failing to arrest a steady decline in its output. Most of its major fields are more than 25 years old. India imports almost 77 percent of its total crude oil requirement and the government is pushing to reduce crude oil and natural gas imports to between 65 and 67 percent in the next six years. Global oilfield service providers are looking for orders from India as drilling and exploration contracts elsewhere in the world are fast drying up following a plunge in oil prices. Despite a 60 percent fall in global crude oil prices in the past year-and-a-half, ONGC has maintained its capital spending and has spent about $4.5 billion so far in the current fiscal year to end-March to bolster production. Besides Schlumberger and Halliburton, ONGC is in talks with Weatherford International and Baker Hughes Inc., among others, he said. He said ONGC is working to identify fields where output has come to a standstill after years of operation, but which the service providers see as offering potential. (in.reuters.com)

Indian firms invest $1.7 bn for stake in Russian Taas-Yuriakh oilfield

March 16, 2016. Three Indian oil firms plan to invest $1.7 billion to pick up a stake in the Russian oil field Taas-Yuriakh. Indian Oil Corp (IOC), Oil India Ltd (OIL) and Bharat Petro Resources Ltd, the upstream arm of state-owned refiner Bharat Petroleum Corporation Ltd (BPCL), will also invest $180 million each as part of future capital expenditures. The Taas-Yuriakh field is currently producing 20,000 barrels per day (bpd) of crude oil and is expected to go up to 100,000 bpd in the next two years. (in.reuters.com)

Downstream.....

Indian refiners to import Iranian crude on FOB basis from April

March 22, 2016. Starting April, Indian refiners will begin importing crude from Iran on a free on board (FOB) basis instead of a CIF (Cost, Insurance and Freight) basis. Earlier in January, international sanctions against Iran were lifted giving India unrestricted access to its crude oil. Bharat Petroleum Corporation (BPCL) said the company would begin importing Iranian crude in a few months' time. Indian insurers typically faced a lot of hurdles in insuring refineries importing Iranian crude. In 2013, Iranian crude-importing refineries had to face problems as insurance firms declined to extend full coverage, citing lack of reinsurance coverage. For this, a ₹ 2,000 crore Indian Energy Insurance pool was proposed to cover the refineries that were importing crude oil from Iran. However, this failed to take off due to the differences in opinion between oil companies and the previous UPA government on the size of the cover and pool. While oil companies were asking for a cover of ₹ 9,500-11,000 crore, the government offered only ₹ 2,000 crore. Of the Rs 2,000-crore insurance pool, the petroleum ministry was to contribute around ₹ 1,000 crore through the Oil Industry Development Board, and the finance ministry another ₹ 1,000 crore. (www.business-standard.com)

Oil Minister flags off 'goodwill' consignment of diesel to Bangladesh

March 17, 2016. Oil Minister Dharmendra Pradhan flagged off a 'goodwill' rail rake carrying 2200 tonnes of high speed diesel from Siliguri in West Bengal to Bangladesh. The consignment, an outcome of discussions between the two governments, was sent by Siliguri Marketing Terminal of Numaligarh Refinery Ltd to Parbatipur storage depot of Bangladesh Petroleum Corp Ltd (BPCL). From Siliguri, the 42-wagon consignment will travel over 516 km on the existing railway line via Rangapani, Singabad, Rohanpur to Parbatipur, where it will be received by Bangladesh's energy minister

Nasrul Hamid. Numaligarh Refinery said the consignment is a gesture of friendship and cooperation that exists between India and Bangladesh. The export of petroleum products from India to Bangladesh is also in line with the 'Neighbourhood First Policy' of the government of India to boost trade between the two countries and sub-regional cooperation within South Asia. Bangladesh meets its requirement of petroleum products through imports at Chittagong port. (www.newkerala.com)

Transportation / Trade.....

Adani's licence request for CNG-retailing in Lucknow rejected

March 20, 2016. Oil regulator Petroleum and Natural Gas Regulatory Board (PNGRB) has rejected Adani Gas Ltd's application for the license to retail CNG in Lucknow and instead granted the permit to a joint venture of GAIL (India) Ltd and Indian Oil Corp (IOC). The PNGRB said that it accepts central government authorisation to Green Gas Ltd, a joint venture of GAIL and IOC, for setting up city gas distribution (CGD) network in Lucknow. Adani Gas Ltd (AGL) had applied to the Board on June 11, 2008, seeking grant of authorisation for Lucknow CGD saying it had commenced work in Lucknow before the appointed day, October 1, 2007, when the regulator came into being. Green Gas approached the regulator on May 20, 2009, saying it had central government authorisation for retailing CNG to automobiles and supplying piped cooking gas to households in Lucknow prior to PNGRB coming into being on October 1, 2007. PNGRB however found lacunae in its claims of physical progress and money spent prior to October 1, 2007, and so went by central government authorisation to Green Gas. The company submitted various other statutory clearances and permissions obtained from various authorities. Rejecting AGL's claim of having laid over 56% of the 53-km steel pipeline before October 1, 2007, PNGRB said physical progress was 30.21%. The regulator said investment by AGL before the appointed day in Lucknow does not meet the requirement laid down in its rules, rejecting its application for Lucknow CGD. (www.business-standard.com)

India signs energy deals with Russia's Rosneft

March 16, 2016. Indian state companies signed energy deals worth billions of dollars with Russia's Rosneft to buy into its most promising assets in Siberia, stepping up a drive to cut New Delhi's dependence on imports. Prime Minister Narendra Modi, who wants to cut India's oil imports by 10 percent in six years, is steering efforts to buy foreign energy assets, taking advantage of low global oil prices and a slowdown in China's overseas acquisitions. Under the deals signed with Rosneft CEO Igor Sechin, the Indian companies will raise their stake in the Vankor oil field to almost 50 percent and buy about 30 percent of the Taas-Yuriakh field. The deals will help Rosneft, the world's biggested listed oil producer by output, to pay off debts incurred in its $55 billion acquisition of TNK-BP in 2013. The deals will help India to secure Russian oil output, while Rosneft will gain access to the Indian market, Sechin said. Sechin said that Rosneft hopes to conclude a deal to buy a 49 percent stake in the 400,000 barrel-per-day Vadinar refinery in western India by the end of June. The proposed deal would give Rosneft an additional outlet for its oil as it grapples with a global crude supply glut. A consortium of Oil India Ltd (OIL), Indian Oil Corp (IOC) and Bharat Petro Resources Ltd (BPRL) has bought 29.9 percent stake in Rosneft's Taas-Yuriakh field. Meanwhile, Oil and Natural Gas Corp (ONGC) signed an initial deal to raise its stake in the Vankor project to 26 percent from 15 percent, while the other three companies could together pick up 23.9 percent. A final deal for Vankor will be signed in June. If the deals go through, Rosneft will retain 50.1 percent of Vankor, which produced 22 million tonnes of oil in 2014, representing about a tenth of the company's total output. Indian companies could pay close to $3 billion for boosting their Vankor stake, based on the price ONGC paid for its 15 percent stake in the project, ONGC said. (www.reuters.com)

Policy / Performance.....

India to skip long-term gas pricing contract with Turkmenistan

March 21, 2016. India doesn't plan to freeze a long-term price or formula for the gas it plans to buy from Turkmenistan using TAPI pipeline following a bitter experience with Qatar recently when it had to forego the benefits of commodity crash and pay double the spot rate for a long time before the 25-year contract was reworked. The price of liquefied natural gas (LNG) that is transported long distance using ships has collapsed two-thirds in two years. Global LNG supply is expected to rise by a third to about 330 million metric tonne annually by 2018, likely to further depress prices. Amid this uncertainty that makes predicting long-term gas prices extremely difficult, the government doesn't want to get into a multi-year pricing contract. (economictimes.indiatimes.com)

Oil Minister to visit Iran on April 6-7

March 21, 2016. In a fine balancing act, India will be sending Oil Minister Dharmendra Pradhan to Iran early next month, days after Prime Minister Narendra Modi's visit to the Middle East nation's rival Saudi Arabia. Pradhan is likely to visit Tehran on April 6-7 and Modi's two-day bilateral visit to Riyadh will begin from April 2. This will be the first visit by an Indian minister since the US and western sanctions were lifted against Iran in January. New Delhi is looking to increase engagement with sanction- free Iran by raising oil imports and possible shipments of natural gas. It also wants rights to develop Farzad-B gas field in the Persian Gulf that was discovered by ONGC Videsh Ltd (OVL). Pradhan is likely to push for early conclusion of the contract for Farzad-B field as well as better terms for crude oil imports. Indian firms have so far shied away from investing in Iran for the fear of being sanctioned by the US and Europe. The same was deterring New Delhi from claiming rights to invest nearly USD 7 billion in the biggest gas discovery ever made by an Indian firm abroad. But after the lifting of sanctions, India is making a renewed pitch for rights to develop 12.8 trillion cubic feet of gas reserves OVL had found in 2008. (zeenews.india.com)

Not clear of benefits to Rosneft on Essar stake buy: Moody's

March 21, 2016. Russia's top oil producer Rosneft may pay $2-3 billion to buy 49 percent stake in Essar Oil, Moody's Investor Service said but raised doubt as to how will acquisition of non-controlling stake will create value for it. Moody's said Essar Oil's 20 million tons a year Vadinar refinery refines about 8-10 percent of crude oil refined in India. Rosneft will have to repay about $13.7 billion and $11.3 billion of debt in 2016 and 2017, respectively. Moody's said that in its view the potential acquisition of a non-controlling 49 percent stake in Essar Oil, which Rosneft intends to close in June 2016, is credit negative. Essar Oil Ltd comprises a Vadinar refinery with an annual capacity of about 20 million tonnes and about 1,600 stations located in India. The partners plan to substantially increase the refinery's capacity to 25 million tonnes and increase the number of stations to 5,000 within the next two years, which will require substantial capital expenditure. (www.business-standard.com)

ONGC, OIL ratings may come under pressure: Moody's

March 18, 2016. Ratings of state-owned Oil and Natural Gas Corp (ONGC) and Oil India Ltd (OIL) might come under pressure if oil prices fall more than expected and companies carry on with their growth and expansion plans aggressively, Moody's Investors Service said. The drop in energy prices and corresponding capital market concerns will raise financing costs and increase refinancing risks for exploration and production companies. However, the impact of the drop in oil prices and low natural gas prices will vary substantially from issuer to issuer, depending on their production mix between oil and gas, the ability to reduce lifting cost and operating expenditure, flexibility to reduce capital expenditure without affecting production, reserve replenishment needs and the expected deterioration of financial profiles relative to ratings. (www.business-standard.com)

[NATIONAL: POWER]

Generation.....

Sembcorp to double power plant capacity

March 22, 2016. Sembcorp Gayatri Power, which has 2,640 MW thermal projects in Krishnapatnam in Andhra Pradesh, is mulling to double capacity at an investment of up to ₹ 12,000 crore. Sembcorp Gayatri Power Complex in Krishnapatnam houses two power plants with combined capacity of 2,640 MW. Singapore-based Sembcorp holds about 70 percent on both the power projects while the rest is held by Gayatri. Thermal Powertech Corp India Ltd (TPCIL) has secured over 85 percent of its net total generating capacity under long-term power purchase agreements 570 MW agreement with Telangana Power Distribution Companies and 500 MW agreement with Power Distribution Companies of Andhra Pradesh and Telangana. (www.thehansindia.com)

Jindal brothers near $782 mn power plant deal

March 21, 2016. Indian billionaire Sajjan Jindal's JSW Energy is nearing a deal to buy a 1,000 MW coal-fired power plant from his brother's debt-laden Jindal Steel & Power for about $782 million. The power plant deal would help JSW Energy in its efforts to nearly triple its power generation capacity to about 12,000 MW by early in the next decade. Jindal Steel

and Power commissioned the first of the four 250 MW units at the site in the Raigarh district of Chhattisgarh in 2007, becoming the first private company to set up an independent power plant. (in.reuters.com)

BHEL commissions second 270 MW thermal unit in Punjab

March 21, 2016. Bharat Heavy Electricals Limited (BHEL) has commissioned another 270 MW unit at Goindwal Sahib coal-fired power project in Punjab. The unit has been commissioned at the 2x270 MW Goindwal Sahib coal-fired thermal power project of GVK Power and Infra Ltd, located at Goindwal Sahib city in Tarn Taran district, near Amritsar in Punjab, the company said. The equipment for the project was supplied by various manufacturing units of BHEL located at Trichy, Ranipet, Hyderabad, Bengaluru and Haridwar, while the construction work was carried out by the company's power sector-northern region, the company said. (www.business-standard.com)

9 stalled gas-based plants to generate power

March 20, 2016. The government announced revival of nine stranded gas-based power plants with total installed capacity of 5,942 MW, which successfully bid electricity at ₹ 4.70 per unit for six months beginning April, at the conclusion of the reverse e-auction process. The auction process successfully concluded wherein 9 plants emerged as preferred bidders and were allocated 7.62 million standard cubic meter per day e-bid RLNG (reliquefied natural gas), the power ministry said. Auctions for the first and second phases were held in May and September respectively last year. The 31 power stations with a combined capacity of 14,305 MW became eligible to apply for Power System Development Fund (PSDF) to generate 30 percent of their installed capacity using imported LNG. In the first phase of auctions, 10 of the plants bid through reverse e-auction for generating over 5 billion units of electricity to be supplied at below ₹ 5 per unit during peak summer, and in the second phase, 13 plants with an installed capacity of 8,262.08 MW emerged successful bidders. (www.thestatesman.com)

Reliance Power gets nod to mine extra coal for Sasan UMPP

March 16, 2016. Reliance Power said that the union coal ministry has allowed the company's Sasan Ultra Mega Power Project (UMPP) in Madhya Pradesh to mine additional coal from its Moher and Moher Amlohri captive coal blocks attached to the project. The project has been allowed to mine coal upto 17.20 million tonne per annum (mtpa) during the current fiscal, the company said. In June 2015, the coal ministry had directed Sasan UMPP to limit annual coal production to 16 mtpa, it said. The company said the permission will help it generate an additional 2,200 million units of electricity, which will benefit 42 crore people across seven procuring states. (www.business-standard.com)

Transmission / Distribution / Trade...

Kalpataru Power bags ₹ 13.2 bn orders from Power Grid Corp

March 22, 2016. Kalpataru Power Transmission Ltd said it has secured orders worth ₹ 1,320 crore from Power Grid Corp. The other includes a transmission line supply project for Gadarwara-Warora Transmission Line Project of about ₹ 353 crore from Powergrid Warora Transmission Ltd. Also an order is one transmission line supply project for ultra mega solar park transmission system in Andhra Pradesh of ₹ 77 crore a ₹ 44 crore for a substation project. Further, turnkey transmission line project of 765 KV Vemagiri-Chilakaluripeta of about ₹ 778 crore from Powergrid Southern Interconnector Transmission System Ltd, a wholly-owned subsidiary of Power Grid Corp. Besides, the company also got turnkey transmission line project of ₹ 73 crore in Abu Dhabi. These have taken the order book value to over ₹ 7,450 crore in 2015-16 with around 55 percent contribution from domestic transmission business, 10 percent from domestic infrastructure business and balance from international markets. (www.business-standard.com)

Coal supply to power sector up 6 percent at 370 mt in April-February

March 20, 2016. Coal India Ltd (CIL) supplied 370.80 million tonnes (mt) of fuel to the power sector during April-February this fiscal, higher by 6.4% than that in the same period last year. CIL, which accounts for over 80% of the domestic coal production, had dispatched 348.34 (mt) of the dry fuel during April-February 2014-15. The dispatches by CIL in February also increased marginally by 1.8% to 33.929 mt compared to 33.337 mt in the same month of 2015, according to the data. Coal dispatches rose during the period under review on the back of increase in production of CIL and improvement in evacuation of the dry fuel, according to industry analysts. CIL has achieved 9.2% increase in production this year so far, against an average of 3% growth over the last five years. Fuel supply by Singareni Collieries Company Ltd (SCCL) in April-February 2015-16 increased by 23% to 43.098 mt, over 35.034 mt in the same period last fiscal, the official data showed. The government is targeting coal production of 1.5 billion tonnes by 2020. Of this, CIL is looking at an output target of

one billion tonnes. The government is aiming to provide 24x7 power by 2019 by creating cost-effective infrastructure which will be sustainable and inclusive of clean energy solutions. (www.business-standard.com)

Electricity bills of Delhiites to come down by a maximum of 6 percent

March 17, 2016. The electricity bills of Delhiites will go down by a maximum limit of 6% as the permission to power distribution companies to levy the fuel surcharge or power purchase adjustment cost (PPAC) by the Delhi Electricity Regulatory Commission (DERC) has lapsed on March 15. All three power distribution companies now cannot impose any fuel surcharge on the electricity bills which will lead to a reduction of upto 6% in the bills of the consumers in the national capital. The DERC had allowed power discoms to levy PPAC surcharge following a directive from the Appellate Tribunal for Electricity (APTEL) since June 15, 2015. For past nine months, the consumers had to pay four to 6% fuel surcharge with their bills. People living in North and North-West Delhi, where Tata Power Delhi Distribution Ltd distributes electricity, will now see a reduction of around four percent in their monthly electricity bills while consumers of BSES Rajdhani Power Ltd and BSES Yamuna Power Ltd will see a cut of 6% in their power bills. They said after March 31, the discoms were expecting annual power tariff revision, pending since 2014, as the AAP government was against any hike. The government had forced DERC not to allow any hike in power bills last year. Power distribution companies will review their power purchase costs for the January-March quarter of the current year and submit fresh petitions for PPAC only after they receive the power bills from National Thermal Power Corp. (www.hindustantimes.com)

IPC eyes further acquisitions to step up generation business

March 16, 2016. As part of its plans to scale up its power generation capacity by nearly 19 times to exceed 2,000 MW in the coming years, India Power Corporation (IPC) is looking forward to acquire another 3-4 stressed thermal plants in the near future. This move will augment the power company's generation capacity by 500-750 MW. Additionally, new plants need power purchase agreements as well as fuel supply agreements to be drawn and implemented. The company's decision comes in wake of its recent acquisition of the entire 89 percent stake of French energy firm Engie in Meenakshi Energy in Nellore in Andhra Pradesh. IPC will thereby have the controlling stake in this power plant whose net worth is around ₹ 1,600 crore but will also have to bear a burden of ₹ 3,000 crore of debt owed by the power producer. The company, which is also into distribution business having a portfolio totaling 7,694 sqaure kilometers has also applied for parallel distribution licenses in West Bengal and Harayana. (www.business-standard.com)

Policy / Performance.....

Odisha CM writes to PM for fresh coal block to OTPCL

March 22, 2016. Odisha Chief Minister (CM) Naveen Patnaik sought Prime Minister (PM) Narendra Modi's help for cancellation of Tentuloi coal block and allocation of another suitable block to Odisha Thermal Power Corp Ltd (OTPCL) for its upcoming project in Dhenkanal district. Tentuloi coal block was allocated to OTPCL, which is setting up a 3,200 MW super critical thermal power plant in Dhenkanal, as no other alternative block was available at that point of time, Patnaik said in a letter to Modi. As the cost of extracting coal from this deep cast mine would be prohibitively high, Union Ministry of Coal had been requested several times for cancellation of the block, the CM said, referring to the letters he had written to the Coal Minister in September 2013 and November 2015. Patnaik said the demand for power in the state is growing rapidly. (indiatoday.intoday.in)

Centre has given UP more than ₹ 110 bn for electrification: Goyal

March 22, 2016. The Centre has allocated more than ₹ 11,000 crore for bringing electricity to every nook and corner of Uttar Pradesh (UP), despite the failure of successive governments in the state to utilize central grants meant for the purpose over the last one decade, Power Minister Piyush Goyal said. He announced that the Centre has allocated ₹ 20 crore for building nine new sub-stations across the district. (www.business-standard.com)

'Cabinet note soon on linkage auction for power plants'

March 21, 2016. The Coal Ministry will soon move a draft Cabinet note for auctioning linkages for the dry fuel to the power sector. This assumes significance in the backdrop of the government's commitment to provide affordable round-the-clock electricity to all. The Cabinet Committee on Economic Affairs (CCEA) had approved allocation of coal linkages for non-regulated sector only through auction. Sectors included were cement, steel/sponge iron, aluminium, and others (excluding fertiliser, urea). Coal and Power Minister Piyush Goyal has said that the framework attempts to make coal

available in a fair manner to end-users. Coal Secretary Anil Swarup had said that coal linkages for 24 million tonnes will go under the hammer in the first year. Till now, Standing Linkage Committee has been deciding on allocation of long-term and short-term linkages for the sectors, including power and steel. (www.business-standard.com)

PFS extends ₹ 11 bn loans to power sector

March 21, 2016. PTC India Financial Services (PFS) announced that it has sanctioned loans worth around ₹ 1,100 crore as financial assistance to the power sector. The loans include four projects for renewable sector and two for transmission of power. Last year, the International Finance Corp (IFC), the private financing arm of the World Bank, subscribed to $35 million worth of 10-year non-convertible debentures issued by PFS to boost long-term financing for renewable energy projects in India. (www.thehansindia.com)

IEEMA welcomes UDAY initiative to improve power situation in UP

March 19, 2016. Indian Electrical and Electronics Manufacturers' Association (IEEMA) organized an interactive session on 'Making UDAY Happen' in Lucknow attended by many key government officials from the Centre and state government and industrialists. The session delved upon the power and energy sector in Uttar Pradesh. Coal Secretary Anil Swarup expressed hope and optimism about reviving power situation in the country. IEEMA welcomed the Ministry of Power's scheme of 'Ujjwal Discom Assurance Yojana' (UDAY) in this regard. To overcome the mounting loss of the power utilities and AT&C losses of 25%, Uttar Pradesh has recently signed up for the UDAY scheme, a welcome move which is expected to result in the savings of ₹ 33,000 crore for the state. Besides helping Uttar Pradesh Power Corporation Ltd (UPPCL) to bring about financial turnaround, UDAY would also help them in raising cheaper funds for their future capital investment requirement. It is a great initiative, jointly owned by central & state governments which will have far reaching implications in terms of making 24 X 7 Electricity for all at affordable prices, IEEMA said. (timesofindia.indiatimes.com)

Smart grids to help provide power to all: Goyal

March 17, 2016. Power Minister Piyush Goyal strongly advocated the need for India to adopt smart grids and concepts to improve energy access for ensuring that power reaches all in the country. He asked policymakers and stakeholders to work towards efficient networks to ensure 24X7 affordable energy to every citizen. The goal is to have smart meters in every establishment and home in India, he said. (www.business-standard.com)

[INTERNATIONAL: OIL & GAS]

Upstream.....

BP expects flat output at its Azeri oilfields this year

March 21, 2016. British oil major BP expects flat oil production in 2016 at its Azeri-Chirag-Guneshli (ACG) oilfields in Azerbaijan, where it plans two rounds of maintenance this year, the company said. Production at the ACG fields, which account for most of Azerbaijan's oil output and are operated by a consortium led by BP, totaled 31.3 million tonnes last year, down slightly from 31.5 million tonnes in 2014. BP had two sets of planned maintenance last year - in May and November. Azerbaijan's crude oil and condensate production in 2015 fell 0.8 percent to 41.7 million tonnes. Shah Deniz is being developed by an international consortium led by BP. The offshore field is estimated to contain between 1.2 trillion and 1.5 trillion cubic meters of gas. Shah Deniz I has been pumping gas since 2006, and gas from its second stage is expected to reach Europe by 2020. Natural gas output from Shah Deniz was 9.9 billion cubic meters (bcm) last year, the same as the previous year. Azerbaijan's total natural gas production rose to 29.7 bcm last year, from 29.4 bcm a year earlier. (www.reuters.com)

Leviathan partners said in talks to secure up to $4 bn

March 21, 2016. The partners in Israel's Leviathan natural gas find are seeking to raise as much as $4 billion to develop the offshore field and are in talks with banks on funding plans. Noble Energy Inc. of the U.S. and Israel's Delek Group Ltd and Ratio Oil Exploration 1992 are seeking to raise between $3.5 billion and $4 billion. The partners will secure their slices of the funds in proportion to their ownership of the Leviathan field. Delek owns 45 percent through its units, Delek Drilling LP and Avner Oil Exploration LLP, while Noble owns 40 percent. Gas discoveries off Israel's Mediterranean coast include the Tamar field and Leviathan, the country's largest deposit, which have brought the nation closer to energy independence

and to becoming an energy exporter. Tamar holds about 10.8 trillion cubic feet of gas and Leviathan about twice that amount. The partners are negotiating to export about 10 billion cubic meter a year of natural gas to Turkey, which would be worth about $2 billion a year. (www.bloomberg.com)

ADNOC to finish maintenance at Murban oilfield in April

March 21, 2016. The Abu Dhabi National Oil Company (ADNOC) plans to complete in April partial maintenance at its oilfields that produces flagship Murban crude. The maintenance at the joint venture Abu Dhabi Company for Onshore Petroleum Operations Ltd fields started in February and reduced Murban's production by about 350,000 barrels per day. (af.reuters.com)

Kosmos Energy makes new large gas discovery off Senegal and Mauritania

March 18, 2016. US upstream oil and gas company Kosmos Energy has announced that it had made a fourth significant gas discovery off the coasts of Mauritania and Senegal. This discovery raises the company's gross resource estimate for the Tortue West structure from 11 to 14 trillion cubic feet (Tcf) and the gross resource estimate for the Greater Tortue Complex from 17 Tcf to 20 Tcf. Kosmos Energy is confident to have sufficient proven gas resource to underpin a world-scale LNG project in the Tortue West structure. The company plans to drill the first of three independent oil tests in blocks offshore Mauritania and Senegal, starting with the Teranga-1 well, located in the Cayar Offshore Profond Block, offshore Senegal. (www.enerdata.net)

US oil drillers add one rig after 12 weeks of cuts

March 18, 2016. United States (US) energy firms added one oil rig after 12 weeks of cuts, data showed, after oil futures have soared over 50 percent since falling to a 12-year low in mid-February. The total oil rig count rose to 387 in the week to March 18, compared with 825 oil rigs operating in the same week a year ago, oil services company Baker Hughes Inc said. In 2015, drillers cut on average 18 oil rigs per week for a total of 963 for the year, the biggest annual decline since at least 1988. The additions showed that at least some producers were willing to start drilling again in hopes oil prices will continue to rise in the future. Energy firms have sharply reduced oil and gas drilling since the selloff in global crude markets began in mid-2014. Despite the one rig gain on the oil side, total oil and natural gas rigs declined by four to 476, the lowest level since at least 1940, according to Baker Hughes. Gas rigs fell by five to 89, their lowest level since at least 1987. Still, many analysts think the combined rig count will rebound with signs that prices have bottomed after U.S. crude futures hit a 12-year low of $26.05 a barrel in February and US gas futures fell to a near 18-year low of $1.611 per million British thermal (mmBtu) units earlier in March. Since hitting those lows, US oil futures have soared over 50 percent to around $40 a barrel, while U.S. gas gained about 20 percent to around $1.917 per mmBtu. US crude futures for the balance of 2016 were fetching around $43 a barrel. After lowering its estimates due to reduced exploration and production company spending, Cowen forecast combined oil and gas land rigs would bottom in the 375 to 400 range before edging up to 401 at the end of 2016 and 739 at the end of 2017. There were 450 active US land rigs on March 11, according to Baker Hughes. (www.reuters.com)

Statoil says oil field breakeven level should drop below $40

March 17, 2016. Norwegian oil major Statoil will push the average cost of new fields in its portfolio to a level below $40 per barrel, the company said. Statoil said extensive cost cuts had brought the break even cost of projects set to start production by 2022 down to $41 per barrel from $70 seen in 2013. In addition to cutting its capital spending plan to $13 billion this year from $14.7 billion in 2015, it has also set a cost cutting target of $2.5 billion on an annual basis. (www.reuters.com)

Downstream.....

US on track for record summer gasoline demand

March 21, 2016. The United States (US) will probably consume a record amount of gasoline in 2016, passing the previous peak set in 2007, and the prospect is helping lift crude oil prices. Recent data indicates the country is on track for its biggest-ever driving season this summer, which will keep refineries running flat-out turning crude into the motor fuel. A rapid expansion in US gasoline consumption has coupled with strong demand growth in India and China, falling crude output in the US, and hedge funds turning bullish, to send crude and fuel prices surging. US motorists consumed 9.16 million barrels per day (bpd) of gasoline in 2015, just 125,000 bpd short of the record 9.29 million bpd set in 2007. The US

Energy Information Administration (EIA) is still forecasting consumption in 2016 will remain slightly below the 2007 peak. In December 2015, the EIA predicted gasoline consumption would rise by just 10,000 bpd in 2016. By January, it had upped its forecast increase to 70,000 bpd and in March, the agency raised the number to 90,000 bpd. Some analysts have suggested the current strength of implied consumption is partly a statistical effect as refiners and blenders push out winter-grade gasoline into the market before summer specifications kick in. But the shift from winter-grade to summer-grade gasoline occurs at the same time every year so it is not clear how it could account for unusual implied consumption in 2016. US refineries have been running hard to turn crude into gasoline to meet demand from motorists. In almost every week so far in 2016, refineries have processed a record amount of crude oil for the time of year. (www.reuters.com)

Aruba refinery to start hiring staff in April to repair plant

March 21, 2016. The refinery in Aruba plans to start hiring workers in April to repair and upgrade the 235,000 barrel per day plant, while its proposed new operator, Citgo Petroleum, continues talks with the government to sign a contract to lease the idled facility. Talks between Citgo, Venezuelan PDVSA's refining unit, and Aruba's government started last year for an agreement on a 25-year lease. Talks between the parties have progressed, but they are far from setting a date to begin restarting the refinery, which could last up to two years before production resumes for the first time since 2012. Aruba's Prime Minister Mike Eman said that talks continued but declined to elaborate as details could not be provided in the middle of negotiations. A team of Citgo technicians has been working since 2015 on a plan to restart and upgrade the plant. (in.reuters.com)

China diesel exports may rebound further on oil price rally

March 21, 2016. China's diesel exports may be climbing further after rebounding from a five-month low as rising global crude prices make shipments overseas more profitable, according to ICIS China. Outbound shipments may surge to more than 1 million metric tons this month, up more than 30 percent from average during January and February, according to Lin Jiaxin, an analyst with the Shanghai-based commodity researcher. That would be the highest since a record in September. Exports in February rose 8.6 percent from the previous month to 792,420 tons, the General Administration of Customs said. The nation's diesel inventory is expected to have risen by as much as 15 million barrels last month, Nevyn Nah, a Singapore-based analyst with Energy Aspects Ltd., said. Sinochem Group's Quanzhou refinery in southern China, the company's largest by capacity, plans to export about 100,000 tons of diesel this month, its first shipments ever of the fuel, the company said. (www.bloomberg.com)

PetroVietnam plans to build natural gas plant in Vietnam

March 17, 2016. Vietnam Oil and Gas Group (PetroVietnam) is planning to build a natural gas processing plant in Quang Nam Province's Nui Thanh District in the south central Vietnam as part of a $3.8 billion project. Construction of the natural gas processing plant, which will occupy 2,471 acres in Tam Quang Commune in Nui Thanh District, 90 kilometers south of Danang, is scheduled to commence in 2017. Feedstock for the planned natural gas plant, expected to come into operations in 2023, will come from the Ca Voi Xanh gas field, located around 100 kilometers offshore Quang Nam Province. The processing plant would receive around 353.1 billion cubic feet (10 billion cubic meters) of gas from the Ca Voi Xanh field. (www.rigzone.com)

Shell JV Deer Park gasoline unit out of production

March 17, 2016. The gasoline-producing unit at Royal Dutch Shell Plc's joint venture (JV) 316,600 barrel per day (bpd) Deer Park, Texas, refinery has been out of production when a leak was discovered in a pipe on the unit. The 70,000 bpd fluidic catalytic cracking unit has been kept at operating temperature and circulating gas oil feedstock while Shell works to repair the leak of naphtha in an overhead line on the FCCU. The Deer Park refinery is a 50-50 JV between Shell and Mexico's national oil company, Petroleos Mexicanos. (www.reuters.com)

Transportation / Trade.....

Russia deals deepen India hold in China oil-buying backyard

March 22, 2016. India is expanding its footprint in China's backyard by forging deals with Russia for stakes in Siberian fields that supply Asia's biggest economy and crude consumer. Deals between Rosneft and Indian state-run companies beefed up the South Asian nation's share in two assets that are linked to the East Siberia-Pacific Ocean pipeline. That

conduit has a direct link to China, which also lifts a majority of ESPO supplies shipped from the Pacific port of Kozmino and is the biggest buyer of Russian crude. A group of three Indian state-run companies will take a combined 29.9 percent share in Taas-Yuriakh Neftegazodobycha, the Asian nation's petroleum ministry and Rosneft OJSC said. The consortium, made up of Indian Oil Corp, Oil India Ltd and Bharat Petro Resources Ltd, expects to close the deal by September. Russia's biggest oil company also offered 23.9 percent in Vankorneft to the group as well as a separate 11 percent in the project to ONGC, which would be in addition to the 15 percent that the Indian explorer bought for $1.27 billion in September. If the Vankorneft deals are closed, the four Indian state-run companies will own a total of 49.9 percent in the project, which is Russia's second-largest oil development. For Russia, the deals are part of its effort to boost sales of its supplies amid a glut and potentially grab a slice of the Asian market from dominant Middle East suppliers such as Saudi Arabia. ONGC will explore long-term oil-supply agreements with Rosneft. Rosneft signed an agreement with Mumbai-based Essar Oil Ltd to start crude shipments this year, the Russian energy giant said. It signed a deal in July to supply 10 million metric tons a year, or 200,000 barrels a day, to Essar's Vadinar refinery in the western state of Gujarat. (www.bloomberg.com)

Iran will inaugurate new gas pipeline to the Iraqi border

March 22, 2016. Iran will inaugurate the Iranian part of a 270 km gas pipeline to Iraq by the end of March 2016. Iran commissioned its 97 km section in August 2015. The gas pipeline stretches from Charmaleh (western province of Kermanshah in Iran) to Naft Shahr (border with Iraq) and will eventually reach Basrah in Iraq. It is expected to supply gas to the al-Mansourieh, al-Sadr and al-Quds reverifies in Iraq. (www.enerdata.net)

Chevron begins shipping first cargo from Gorgon project in Australia

March 21, 2016. American energy company Chevron has started shipping its first cargo of liquefied natural gas (LNG) from the $54 bn Gorgon project to Chubu Electric Power of Japan. The cargo will be delivered through new LNG carrier Asia Excellence from the project located on Barrow Island off the northwest coast of Western Australia. The company had started production from the project after facing delays and rise in construction cost. To strengthen its position as a major LNG suppler, Chevron Shipping Company is in the final stages of its largest shipbuilding and fleet modernization program. The program aims to add six new LNG carriers to its existing fleet. The supply of for its Gorgon project comes from the Gorgon and Jansz-Io gas fields, located within the Greater Gorgon area, between 130 km and 220 km off the northwest coast of Western Australia. The project's cost ballooned from an estimate of, when the companies decided to go ahead with the venture. The development is expected to reach full capacity at its three production facilities, known as trains, by the second half of 2017, Earlier this year, Chevron signed an agreement to supply LNG to China-based ENN LNG Trading for ten years from the Gorgon project. ENN is expected to buy up to 0.5 million metric tons per annum (mtpa) of LNG beginning in 2018 or the first half of 2019. Previously, Chevron also agreed to supply one mtpa of LNG to China Huadian Green Energy for over ten years starting in 2020 from the Gorgon and Wheatstone LNG projects. (transportationandstorage.energy-business-review.com)

Kenya, Uganda discuss rival routes for oil export pipeline

March 21, 2016. The Kenyan President Uhuru Kenyatta and Ugandan President Yoweri Museveni held talks about which route to choose for an oil export pipeline that Kenya wants to go through its territory rather than neighbouring Tanzania, but discussions did not reach any final deal. Land-locked Uganda, which like Kenya has oil fields it is seeking to develop, has sent conflicting signals about its preferred route, which needs to be confirmed and evaluated for energy companies to decide on commercial production. This year, Uganda said it planned to build a pipeline through Tanzania instead, bypassing Kenya. France's Total, which has a stake in the Ugandan fields, has previously raised security concerns about the Kenyan route. Sections of the Kenyan pipeline could run near Somalia, from where militants have launched attacks on Kenya. (af.reuters.com)

PDVSA to receive US crude cargo from PetroChina

March 21, 2016. Venezuela's state-oil firm PDVSA has bought a 500,000-barrel cargo of U.S. crude from trading company PetroChina for delivery April 1-10 at its terminal in the Caribbean island of Curacao, traders said. The purchase is separate from a large tender launched by PDVSA to buy some 8 million barrels of United States and Nigerian crudes that was awarded to British firm BP and China Oil. PDVSA, which needs foreign light crude to use as a diluent for its extra heavy oil

and to process at its Caribbean refineries, started buying West Texas Intermediate in January. Since then it has received two 500,000-barrel cargoes and another one of the same size on tanker Orpheas is expected to arrive in Curacao. The company postponed another tender to buy 2.1 million to 3 million barrels of Russia's Urals crude, also for delivery during the second quarter, the traders said. Bids for that tender will be accepted. If PDVSA awards them all, the tenders more than double the company's crude imports in the second quarter to some 120,000 barrels per day. (www.reuters.com)

Petrobras mulls giving up control of fuel distribution unit

March 18, 2016. Brazil's state-controlled oil company Petróleo Brasileiro SA (Petrobras) is considering selling control of fuel distribution unit BR Distribuidora SA after bidders failed to emerge for a minority stake. The oil company is mulling a change in strategy for the unit sale after three of the four bidders that delivered preliminary proposals wanted management rights or a bigger slice of voting stock. About 30 companies had initially shown interest in the stake. None of the proposals for BR Distribuidora specified a price for the unit. The company, which controls Brazil's largest gasoline, ethanol and diesel-station network, was valued last year at around $10 billion by UBS Securities analysts. (www.reuters.com)

CFE selects builder for La Laguna-Aguascalientes gas pipeline

March 18, 2016. Mexico's state-owned power utility, the Federal Electricity Commission (Comision Federal de Electricidad, CFE), has selected energy company Fermaca for the construction of the 600 km La Laguna - Aguascalientes gas pipeline. The gas pipeline project will transmit 12 billion cubic meters per year of gas as of January 2018 through the states of Durango, Zacatecas and Aguascalientes. It will interconnect with the pipeline El Encino - La Laguna, currently under construction, and the pipeline Villa de Reyes - Aguascalientes - Guadalajara, which is currently bidding on. The project was estimated at US$1,285 mn and was won by Fermaca at a price of US$373 mn. CFE had received two other bids, from Aguaprieta pipeline (IEnova) and from Transportadora de Gas del Noroeste (Transcanada). (www.enerdata.net)

Iran's January oil exports hit 22 month high

March 17, 2016. Iran's oil exports climbed to the highest in 22 months in January when sanctions against its economy ended, opening the way for higher shipments to Asia and new sales to Europe and Africa. Exports rose to 1.55 million barrels a day in January, the highest since March 2014 and 9.2 percent higher than the month before, according to data from Riyadh-based Joint Organisations Data Initiative (JODI). Production climbed to 3.37 million barrels a day, the most since February 2014. Iran aims to increase production to 4 million barrels a day before it will consider joining oil producers in a proposal to freeze output. That would be the highest since October 2008, according to JODI data. (www.bloomberg.com)

Saudi oil exports rise to 7.8 mn bpd in January

March 17, 2016. Saudi Arabia's crude oil exports in January rose to their highest level in nine months to 7.835 million barrels per day (bpd) from 7.486 million bpd in December, according to data from Joint Organisations Data Initiative (JODI) data. The world's largest oil exporter and OPEC heavyweight produced 10.230 million bpd in January, a record high, compared with 10.144 million bpd a month earlier, the data showed. Saudi Arabia's domestic crude oil inventories fell to 314.119 million barrels in January from 325.474 million barrels a month earlier. Domestic refineries processed 2.468 million bpd of crude, compared with 2.312 million bpd in December, while exports of refined oil products fell to 1.343 million bpd in January from 1.441 million bpd the month before. In January crude oil burnt to generate power fell to 293,000 bpd from 392,000 bpd in December, the JODI data showed. (www.reuters.com)

TransCanada to buy Columbia Pipeline Group for $10.2 bn

March 17, 2016. TransCanada Corp, the company behind the controversial Keystone XL oil pipeline, said it will buy Columbia Pipeline Group for $10.2 billion, creating one of North America's largest regulated natural gas transmission businesses. The deal, valued at $13 billion including debt, comes months after U.S. President Barack Obama blocked the cross-border Keystone XL crude pipeline. Columbia Pipeline owns and operates about 15,000 miles of natural gas pipelines, connecting the U.S. Gulf Coast to the Midwest, Mid-Atlantic and Northeast United States, home to some of the country's most prolific shale gas plays. That pipeline system will link up with TransCanada's existing assets to create a 5,700-mile network spanning the continent. The deal will also give TransCanada a combined portfolio of C$23 billion ($17.72 billion) of secured near-term growth projects. The company said that would add to per-share earnings in the first full year of

ownership and may boost its dividend growth rate of 8 to 10 percent per year. TransCanada will finance the deal by selling its U.S. Northeast merchant power assets and a minority interest in its Mexican natural gas pipeline business. The company said it had also secured $10.3 billion of credit facilities. The growth in TransCanada's gas pipeline business is in contrast to slow progress in building new crude oil pipelines. The company's proposed Energy East project faced a setback this month when the Quebec government filed a motion for an injunction to ensure that the pipeline complied with the province's environmental laws. If the deal closes in the second half as expected, TransCanada will then own the general partner of Columbia Pipeline Partners LP. Columbia Pipeline Partners, whose general partner is currently owned by Columbia Pipeline Group, will remain a publicly traded partnership, the companies said. (www.reuters.com)

Denmark and Poland consider gas interconnection project

March 17, 2016. Polish gas transmission network operator Gaz-System and its Danish counterpart Energinet.dk are investigating a possible connection between the two transmission systems and aim to complete a feasibility study for the so-called Baltic Pipe project by the end of 2016. The project could have a transmission capacity of up to 3 billion cubic meters per year. (www.enerdata.net)

Japan to import US crude in May

March 16, 2016. Japan will receive a United States (US) crude cargo in May, its second such purchase from the since Washington lifted a four-decade ban on crude exports. This will follow the arrival in April of Japan's first crude cargo from the US, bought by Cosmo Oil Co earlier this year, indicating a growing willingness among Asian refiners to experiment with new grades as they seek to diversify their feedstock sources away from the Middle East. The May shipment will be from Phillips 66. Phillips 66 has sold a Panamax-sized cargo likely to Japan's TonenGeneral. The U.S. firm could not be reached for a comment, while a spokesman for the Japanese refiner declined to comment. Japan usually gets more than 80 percent of its crude from the Middle East. But Cosmo and TonenGeneral, which have bought U.S. condensate previously, are among the more adventurous Asian buyers who are willing to experiment with new grades. (www.reuters.com)

Policy / Performance.....

Iraq seeks financial agreement with Kurds before pumping crude to Turkey

March 22, 2016. Iraq will not resume pumping crude through a Kurdish pipeline to Turkey unless it reaches a financial agreement with the Kurdish Regional Government (KRG), the Iraqi oil minister Adel Abdul Mahdi said. He said that the central Iraqi government had decided to stop pumping crude from fields under the management of its state-run company in northern Iraq through the pipeline. He said North Oil Company previously fed 150,000 barrels a day into the pipeline that carries crude from the Kirkuk fields and other reservoirs managed by the Kurdish authorities to the Turkish Mediterranean terminal of Ceyhan. The previous agreement provided for the KRG to transfer to Iraq's central state oil marketing company 550,000 barrels a day of crude produced in the Kurdish region, in return for a 17 percent share in the federal budget, he said. The Kurds stopped all oil transfers to the government in September 2015, at which point they also stopped receiving government funding, he said. (www.reuters.com)

Qatar invites OPEC members and other producers to April oil meeting

March 22, 2016. Qatar has invited all Organization of the Petroleum Exporting Countries (OPEC) members and major producers from outside the exporting group to attend talks next month on a deal to freeze output at January levels to support the global oil market, Qatar's energy ministry said. Members from the OPEC and other main oil producers are due to meet on April 17 in Qatar's capital Doha to discuss stabilizing prices by freezing production. Qatar holds the OPEC presidency in 2016 and has been organizing the effort. (www.reuters.com)

World oil market still oversupplied: Russian Central Bank Governor

March 18, 2016. Russian Central Bank Governor Elvira Nabiullina said that there remained an oversupply on world oil markets. Nabiullina said that a slight recovery in the oil price over the past few weeks was linked to market expectations. Some of the world's major oil producers have tentatively agreed to freeze output levels. (in.reuters.com)

Mexico to proceed with auction round for shale fields this year

March 18, 2016. Mexico will hold a private bidding round for the nation's shale oil fields this year in part to cater to continued interest from U.S. drillers eyeing expansion south of the border, according to Deputy Energy Minister Lourdes Melgar. The country's shale auction "will be this year," Melgar said. Mexico temporarily suspended plans for the country's first-ever auction of its so-called unconventional oil and natural gas fields last year amid falling international crude prices. The interested parties are the "usual suspects" that are producing oil and natural gas in U.S. shale fields and are "mostly independent companies that have been very successful in shale development," she said. The decision to proceed with the sale of shale oil and gas fields adds an extra layer to Mexico's auction plans this year, which also include a bidding round for 10 deepwater areas in the Gulf of Mexico scheduled for Dec. 5. The sales of onshore shale and deepwater fields will be the fourth and fifth oil auctions held by Mexico since the 2014 opening of the country to foreign energy investment, breaking Petroleos Mexicanos' previous government-held crude production monopoly of more than seven decades. (www.bloomberg.com)

Saudi Arabia will join April oil producer meeting in Doha

March 17, 2016. Saudi Arabia will join a meeting of producers from within and outside Organization of Petroleum Exporting Countries (OPEC) in Doha next month, adding weight to the campaign by financially stricken crude exporters to freeze output and overcome the glut that's weighing on the market. Oil Minister Ali al-Naimi said that countries would meet in the nation's capital Doha on April 17. Prices have rallied more than 30 percent since a mid-February proposal by Saudi Arabia, Russia, Venezuela and Qatar to cap oil output and reduce a worldwide surplus that had seen prices slump to 12-year low in January. The summit in April would seek commitments from a wider range of producers both within and outside the OPEC. (www.bloomberg.com)

Norway launches oil exploration round in mature areas with Arctic focus

March 17, 2016. Norway launched its 2016 oil and gas licensing round in mature areas, expanding it to include blocks in the Arctic Barents Sea in a bid to increase northern exploration activity, the oil ministry said. The ministry said it was seeking applications until September and planning to award licenses in early 2016. Some 32 blocks are on offer in the Barents Sea and 24 blocks in the Norwegian Sea. Norway offers licenses in mature areas every year, hoping to attract explorers to blocks passed up or handed back in earlier years. In last year's mature areas licensing round, Norway handed out 56 licenses to 36 companies. (www.reuters.com)

Indonesian President nears decision on Inpex's LNG plant

March 17, 2016. Indonesian President, Joko Widod, will soon decide on either constructing a US$15 billion LNG plant onshore or offshore. The announcement comes after Japanese oil and gas firm Inpex Corp said that the Masela Abadi project would be delayed by at least two years to 2020 after investment delays and job cuts. The company filed its offshore development plan to the Indonesian government in September 2015 but the Indonesian has not yet decided on the location due to internal rifts. The Masela Abadi project is jointly developed by Inpex Corp and Royal Dutch Shell. The delays mean that the project will not be operational until at least 2026, around two years before the companies' contract is due to expire. The offshore project, if given approval, would be the largest LNG project of its kind in the world with planned 7.5 million ton per year capacity. (asiaenergycentral.com)

Britain to cut taxes for North Sea oil producers by $1.4 bn

March 16, 2016. Britain's Finance Minister George Osborne will cut taxes by 1 billion pounds ($1.41 billion) over five years for energy companies pumping oil from the country's North Sea fields, in a boost for an industry suffering low crude prices. The tax cuts are the latest in government measures in recent years to support the North Sea industry, one of the world's most mature oil basins that has been in steady decline since reaching peak production in 1999. Osborne said he would cut a supplementary tax charge on oil companies to 10 from 20 percent and scrap the 35 percent petroleum revenue tax, which had taxed profits for older oil and gas fields. The tax changes, which will be backdated and effective from Jan. 1 this year, will save the industry around 1 billion pounds in the five financial years from 2016/2017 to 2020-2021. North Sea industry group Oil and Gas UK said the oil price fall had accelerated the permanent shutdown of some fields, with 21 ceasing production in 2015, and as many as 80 could follow by the end of 2020. (www.reuters.com)

[INTERNATIONAL: POWER]

Generation.....

Almaraz nuclear power plant seeks to renew operation license

March 22, 2016. Centrales Nucleares Almaraz-Trillo (CNAT), the operator of the Almaraz nuclear power plant, has started to work on its request to extend operations beyond 2020. The plant consists of two units, a 900 MW unit commissioned in September 1983 and a 930 MW unit commissioned in July 1984, located in Caceres. Its operation licence was extended in 2010 for 10 years, until 2020. In the last ten years, CNAT has invested around €600 mn to adapt to the current regulations. The company plans to extend operations beyond 40 years, targeting 50 to 60 years of operations, based on recent lifetime extensions approved in the United States. (www.enerdata.net)

Total wants to branch out into power generation

March 22, 2016. French oil major plans to branch out into power generation and to carry out operations throughout the whole value chain, from power generation to trading and distribution, by 2035. The company has minority stakes in several gas-fired power plants in Abu Dhabi, Nigeria and Thailand, and owns 57.5% of US solar panel manufacturer and 20% in a large CSP power plant in Abu Dhabi. (www.enerdata.net)

Tanzania has awarded to MHPS an order for 240 MW CCGT project

March 21, 2016. Sumitomo, Mitsubishi Hitachi Power Systems (MHPS) and Toshiba have started the construction on the Kinyerezi gas-fired CCGT power plant near Dar es Salaam in Tanzania and set to become the largest in the country, with a generation capacity of 240 MW. The power plant is currently scheduled to go into partial operation at the beginning of 2018 and will be handed over to Tanzania Electric Supply Company (TANESCO) in September 2018. The companies won an engineering, procurement and construction (EPC) contract awarded by the state-owned TANESCO. (www.enerdata.net)

Chinese nuclear plant moves closer to start: Westinghouse

March 18, 2016. Westinghouse Electric Co. expects to put fuel into its first nuclear plant in China this year as it moves closer to start up and vies for a share of a market that may see $1 trillion in spending to boost production through 2050. Westinghouse, the Pennsylvania-based unit of Japan's Toshiba Corp., is preparing to fire up its AP1000 reactor in China after years of delays. It's one of four reactors using the company's technology being constructed in China, split between two facilities. Starting the reactors would be a shot in the arm for Westinghouse, which is competing with French, Russian and domestic producers to take advantage of China's plan to more than double its atomic generation capacity. The company's first reactor in China is getting ready as President Xi Jinping shifts the world's largest energy consumer away from more polluting fossil fuels. (www.bloomberg.com)

Petrovietnam plans to build two 700 MW power plants

March 17, 2016. Vietnamese energy group PetroVietnam (PVN) plans to invest US$3.8 bn in the construction of an offshore gas processing plant and of two 700 MW gas-fired power plants in the central Quang Nam province of Vietnam. The group aims to process 10 billion cubic meters per year of gas from the Ca Voi Xanh offshore gas field, off Quang Nam Province. Construction of the US$1.6 bn power plant would start as early as 2017 for a commissioning in 2023. (www.enerdata.net)

Transmission / Distribution / Trade...

Coal-laden cargo sinks in Sundarbans

March 19, 2016. A cargo vessel carrying coal capsized at Shela river in Chandpai range of the Sundarbans under Mongla upazila of Bagerhat. The Jessore-bound cargo vessel Sea Horse-1 carrying 1235 tonnes of coal from Chittagong port sunk near Harintana area at Tambulbunia canal. The coal it was carrying is used in brick-kilns. Rescue operation will be conducted as it is not possible to reach the spot at night, Saidul Islam, divisional forest officer (DFO) of the East division of the Sundarbans, said. The cargo sank around 25 nautical miles away from their Chandpai range headquarters. On December 9, 2014, an oil tanker sunk in the same river causing a huge loss to the world's largest mangrove forest the Sundarbans. (www.thedailystar.net)

Two Czech firms bid for Vattenfall's German coal and power business

March 16, 2016. Two Czech firms have submitted bids for Vattenfall's loss-making lignite coal mines and associated power plants in Germany, but to reach a deal the Swedish state-owned group might have to pay into covering future decommissioning costs. The sale, launched at the end of 2014, includes roughly 8,100 MW of lignite-fired power plants, which generate about 10 percent of Germany's total electricity, as well as the mines, employing about 8,000 people. Lignite miner Vrsanska Uhelna, part of Czech Coal, and privately-held energy group EPH together with private equity group PPF Investments, have both submitted binding offers, the firms said. German energy group Steag and Australian investment fund Macquarie did not make a formal bid but to stay in the negotiations suggested setting up a foundation that would take over the lignite assets and liabilities. Vrsanska Uhelna did not provide any details on its bid, but EPH said its offer reflected the real value of the assets and liabilities attached to them. German power prices have fallen by around 40 percent since Vattenfall first launched the sale. (www.reuters.com)

Electricity sales dipped in the United States in 2015

March 16, 2016. According to the United States Energy Information Administration (EIA), total electricity sales in the United States contracted by 1.1% in 2015, posting the fifth decline in the last eight years. This decrease is related to a declining consumption in the industrial sector, partly due to energy efficiency improvements but also to economic factors. Industry accounted for 25.8% of total retail electricity sales in 2015. Residential and commercial sales remained nearly stable in 2015, despite a slight growth in the number of households and growth in commercial building space. In 2015, households accounted for 37.7% of retail electricity sales in the US, while commercial accounted for 36.5%. (www.enerdata.net)

Policy / Performance.....

Nigeria targets 4 GW of nuclear power capacity

March 21, 2016. The federal government of Nigeria plans to develop 4,000 MW of nuclear power capacity, with a first stage of 1,000 MW. In June 2015, the Nigeria Atomic Energy Commission (NAEC) selected two sites for the potential construction of two 2,400 MW nuclear power plants. A plant could be built at Geregu in Kogi State, while the other would be built in Itu in Akwa Ibom State. This site selection followed talks with Russian nuclear group Rosatom on the construction of four reactors with a combined capacity of 4,800 MW for a total cost of US$20 bn (N3,900 bn). The reactors would be co-financed by Rosatom, which would then build, own, operate and transfer them to the government. Nigeria, whose electricity consumption doubled between 2002 and 2012, has no nuclear capacity and currently relies on gas to fuel its power capacity. The country is considering developing nuclear reactors, whose costs would range between US$5 bn and US$8 bn per reactor. (www.enerdata.net)

EDF said to plan approval of Hinkley Point nuclear plant by May

March 17, 2016. Electricite de France SA (EDF) still plans to make the final decision to go ahead with an 18 billion pound ($26 billion) nuclear power plant in the U.K. before its annual general meeting in May. Approval for the project could come as early as this month. EDF's finances are coming under strain as falling power prices and rising competition threaten future earnings while it needs to spend € 50 billion ($57 billion) by 2025 to renovate its fleet of French reactors. The French government owns 85 percent of EDF and Finance Minister Michel Sapin said that the state would be willing to accept its dividend in shares to allow the company to invest more cash. EDF has repeatedly delayed taking a decision on Hinkley Point. That's in spite of forming a partnership with China General Nuclear Power Corp and securing guaranteed power prices at about twice the current market rate for 35 years, as well as a government loan guarantee of 2 billion pounds for construction. (www.bloomberg.com)

Polish utilities ready to invest $388 mn in state coal mine

March 16, 2016. Three Polish government-controlled power and gas utilities placed initial bids to buy stakes in a coal producer to be created from money-losing state-held mining assets. PGE SA, PGNiG SA and Energa SA pledged investments of 500 million zloty ($129 million), 400 million zloty and 600 million zloty, respectively, in Polska Grupa Gornicza (PGG), they said. All three want assurances the mining company will be profitable, won't ask them for more capital in the next 10 years and that the cash injection won't be treated as state aid, which could run Poland foul of European Union rules on public assistance. While Poland relies on coal for about 90 percent of its electricity generation, declining

prices for the black fuel have pushed the industry into a 1.9 billion-zloty loss last year. The government won October's general election after promising not to shut any mines and keep the country dependent on coal for decades to come. PGG, needs 2.2 billion zloty of new capital, which can be provided by both utilities as well as financial companies, Deputy Energy Minister Grzegorz Tobiszowski said. (www.bloomberg.com)

[RENEWABLE ENERGY / CLIMATE CHANGE TRENDS]

National.....

ACME wins 75 MW project in Jharkhand

March 22, 2016. Solar power producer ACME said that the company has won a 75 MW project in Jharkhand, taking the company's portfolio to 1,229 MW. The financial bid from ACME for the tariff of ₹ 5.73 a unit for 25 MW and ₹ 5.48 a unit for 50 MW for 25 years was announced during the final bids opening by Jharkhand Renewable Energy Development Agency and subsequent issuance of Letter of Intent, the company said. ACME will sign power purchase agreements with the Jharkhand government and the projects will be developed by December 2017. ACME's portfolio of 1,229 MW includes 440 MW in Telangana, 160 MW in Madhya Pradesh, 104 MW in Punjab and 100 MW in Rajasthan under the Jawaharlal Nehru National Solar Mission Phase II. Other projects include those in the states of Gujarat, Madhya Pradesh, Odisha, Bihar, Uttar Pradesh, Assam and Chhattisgarh. The company said it aims to generate 7,500 MW of solar power by the year 2019. (www.thehindubusinessline.com)

Electric buses daily earn 82 percent more profit than diesel vehicles

March 21, 2016. Electric buses generate 27 percent more revenue and 82 percent more profits than diesel buses per day, according to an Indian Institute of Science (IISc) study evaluating electric vehicles for urban transport. The findings have special significance because primary mass transit in Indian cities is provided by 150,000 diesel buses, held responsible for contributing to urban smog and carbon emissions that are warming the planet. As much as 25 tonnes of carbon dioxide (CO_2) emission can be cut every year for every diesel bus replaced by an electric bus, the IISC study said. Electric buses emit no CO_2, but the electricity needed for their charging stations comes primarily from coal-fired power plants, India's primary energy source. However, if solar panels are set up at the battery charging stations, the annual 25 tonnes of CO_2 emission per bus can be further reduced. Put another way, if 150,000 diesel buses were to be replaced by electric buses, 3.7 million tonnes of CO_2 emissions could be saved. Apart from reducing outdoor air pollution - which kills 670,000 people in India every year, according to an Indian Institute of Management-Ahmedabad paper - a clean bus system would aid national carbon-reduction targets. Transport accounts for a tenth of India's greenhouse gas emissions, as we have previously reported, with a 2009 study attributing 95 percent of these emissions to road transport. India is now the world's fastest-growing major polluter, as we have previously noted, contributing to almost a third of global emissions' growth in 2014. (www.business-standard.com)

India to get $421 mn from US for solar, internet projects

March 21, 2016. India will get $421 million from an American financial institution for its solar and broadband projects to enable it to become a low carbon economy and expand the internet infrastructure. US Government's development finance institution, Overseas Private Investment Corp (OPIC), approved $250 million in senior debt financing to subsidiaries of ReNew Power Ventures Private Ltd to be utilised to construct up to 400 MW of new solar renewable power generation plants in India across multiple projects. ReNew will help India achieve its goals to transition to a low carbon economy, OPIC said. It approved up to $171 million in financing to Tikona Digital Networks, to support the expansion of Tikona's low-cost and rapidly scalable wireless broadband networks across India. (www.newsnation.in)

India should adopt renewables at faster pace: Al Gore

March 19, 2016. India should switch from coal-based power generation to renewable sources of power at a faster rate, Al Gore, former United States Vice-President and Chairman of the Climate Reality Project, said. At a meet on the subject organised by the Confederation of Indian Industry, he said coal-fired power generation was unsustainable and needed to be eradicated. He commended the solar energy alliance launched by Prime Minister Narendra Modi and French President Francois Hollande at the global climate change conference in Paris last year, COP21. Pointing to coal plants shutting down across America, he said additions to installed power generation capacity there were overwhelmingly from renewable

sources of power. Coal-based power addition was down to 0.1 percent. Gore said experts suggest successful models of a clean energy system must move away from fossil fuels, no matter how slowly, towards renewables. Once subsidies are slowly removed from fossil fuels, that revenue should be used to subsidise renewable energy. (www.business-standard.com)

Hindustan Cleanenergy calls for FiT route for solar projects

March 17, 2016. Hindustan Cleanenergy, one of the largest solar energy producers in the country, says India should switch to feed-in-tariff (FiT) mechanism to award renewable energy projects for speedy implementation and reasonable returns for stakeholders. FiT offers price certainty, typically based on cost of production, and long-term contracts to power generators to accelerate investments in renewable energy resources. FiT offers price certainty, typically based on cost of production, and long-term contracts to power generators to accelerate investments in renewable energy resources. Rajya W Ghei, CEO at Hindustan Cleanenergy, said almost all the states in India have realised the importance of sustainable development and the crucial role solar energy can play in it. As a result, all the governments are coming out with policies and measures to increase the ease of setting up solar projects. By revising its renewable target upward by five times, India has opened plethora of opportunities for companies in this sector, he said. Ghei said that for India to reach the target of 40 percent of energy consumption from renewables by 2030, the country needs sustained operations of the top players in the country. The solar energy firm of Hindustan Powerprojects has refrained from aggressive bidding for projects at auctions while focusing on acquiring projects offering viable returns to all its stakeholders, Ghei said. Presently, the Central Electricity Regulatory Commission issues tariff regulations for renewable energy sector but the regulations are not binding upon state governments. Often, the state choose their own process of project allocations. (economictimes.indiatimes.com)

Pavagada solar park to be operational in 2 yrs

March 17, 2016. Work on the State government's ambitious solar park project at Pavagada in Tumakuru district will be completed and the largest such plant in the world will become operational within two years, Energy Minister of Karnataka D.K. Shivakumar has said. He said that this project entailed generating 1,500 MW solar power and it would come up in 12,000 acres of land. The government had finalised the land-lease agreement with farmers by offering an annual rent of ₹ 21,000 per acre. The process of procuring land for this project went off smoothly with no scope from complaints from land owners, he said. Besides, the Energy Department had entered into a pact with National Thermal Power Corp Ltd to sell solar power at ₹ 4.50 per unit. The electricity supply companies too have expressed interest to buy power from this project and the government would consider their proposal favourably. The project-related works would commence shortly as the tendering process had been completed. All works would be completed within the stipulated time and power generation would begin in 2018. Once this project commences, farmers in the region would start getting uninterrupted power supply round-the-clock, he said. (www.thehindu.com)

Solar tariffs hit a new low in Rajasthan

March 16, 2016. Janardan Wind Energy, Suzlon Energy and Maharashtra Seamless won bids for 10 solar projects with a combined capacity of 100 MW offered by NTPC for setting up plants in Rajasthan. While Janardan Wind Energy bagged two projects of 10 MW each, quoting the lowest tariff of ₹ 5.06/kWh in the reverse bidding conducted by NTPC, Suzlon Energy and Maharashtra Seamless won 60 MW and 20 MW respectively offering a marginal higher rate of ₹ 5.07/kWh. All these projects were offered under the Domestic Content Requirement (DCR) category that aims to encourage manufacturing of solar equipment in the country and also mandates the developers to use locally made cells and modules. Rajasthan government has selected NTPC for sourcing solar energy to meet its renewable purchase obligations. (timesofindia.indiatimes.com)

Govt reacts in fits and starts to Paris agreement

March 16, 2016. Three months after India committed to an ambitious set of targets under the global climate change Paris agreement the government is working in fits and starts to put the architecture, policy and regulations in place to achieve what it promised to the global community. India promised a 30-35 percent reduction in the carbon intensity of its economy by 2030 from 2005 levels with two sectoral components defined as well. India promised that 40 percent of its installed power capacity would come from non-fossil fuel energy resources by 2030 and that the country would build an additional carbon sink of 2.5-3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030. The targets, called Intended National Determined Contributions (INDCs), came about as part of a top-down approach by the Union government after three modelling studies it commissioned. But now it is required to break down these targets to specific

sectors, set up regulations and regulators to achieve and monitor the achievement of targets, besides finding the financial resources to do so. The largest emissions in the Indian economy arise from the power sector, transport and buildings. It is relatively easy to regulate the centralised power sector, but transport and buildings require not just engaging state governments but also municipal bodies – a move that has had minimal result previously when the Union government tried to push through energy efficiency in building bye-laws. (www.business-standard.com)

Global.....

China to more than triple solar power capacity in 5 yrs

March 21, 2016. China plans to more than triple solar power capacity by 2020 to as much as 143 GW to help reduce carbon emissions. The country will add 15 to 20 GW of photovoltaic power annually in the next five years, the National Energy Administration (NEA) said. China accounted for more than a quarter of global solar additions with a record 15.1 GW of installations last year, according to data from the NEA. China's total solar capacity was 43.2 GW at the end of 2015, surpassing Germany as the country with the most installed solar capacity. The world's biggest emitter of global-warming emissions is seeking to use solar energy as a means to help meet its pledge of cutting greenhouse gases. Domestic demand is helping China, the world's biggest supplier of solar panels, reduce its dependence on exports. China's installed solar capacity has surged almost 13-fold since 2011. Solar energy accounted for 3 percent of the nation's electricity mix at the end of 2015. The nation produced 43 GW of solar panels last year, equal to 70 percent of global output, the NEA said. (www.bloomberg.com)

Duke Energy to produce power using waste from chickens and pigs

March 21, 2016. Duke Energy Corp, the largest U.S. utility owner, is planning to use methane from pig and poultry waste to generate electricity at four North Carolina plants. The company agreed to buy methane from a biogas facility that Carbon Cycle Energy LLC plans to build in the eastern part of the state, Charlotte-based Duke said. The site will convert agricultural and industrial waste into biomethane. The deal will help Duke comply with North Carolina's renewable energy portfolio standard that requires utilities to use power from agricultural waste. Duke estimates the gas will produce enough electricity to power about 10,000 homes for a year. It plans to use the methane at the Buck Steam Station in Rowan County, Dan River Steam Station in Rockingham County, H.F. Lee Station Combined Cycle Plant in Wayne County and Sutton Combined Cycle Plant in New Hanover County. Carbon Cycle, based in Boulder, Colorado, hasn't identified the location of the facility, which will produce more than one trillion British thermal units annually. It still requires government approval. (www.bloomberg.com)

Statoil launches pilot battery storage for offshore wind project

March 21, 2016. Norway based oil and gas company Statoil has launched 1 MW storage system at its 30 MW Hywind floating offshore wind farm located near the coast of Peterhead in Aberdeenshire, Scotland. Statoil has signed a Memorandum of Understanding (MoU) with the Scottish Government, the Offshore Renewable Energy Catapult and Scottish Enterprise for the development of the storage solution called Batwind. Statoil install a 1 MWh lithium battery based storage pilot solution in later part of 2018 which will be equal to battery capacity of more than 2 million iPhones. Implementation of the storage solution in pilot scale will provide technological and commercial foundation for the implementation of Batwind in full-scale offshore wind farms. (utilitiesretail.energy-business-review.com)

BHP Billiton announces plans for environmental management in Western Australia

March 21, 2016. BHP Billiton Western Australia Iron Ore has lodged a Strategic Environmental Assessment (SEA) of its central Pilbara iron ore assets to contribute to the long term environmental planning and management of its operations. The SEA is the first of its kind in the Australian mining industry and gives an overview of the regional environmental footprint of all of the Company's current and potential future Pilbara-based iron ore operations. BHP Billiton Western Australia Iron Ore Asset President, Edgar Basto said the Company had been operating in the Pilbara for almost 50 years and understood the environmental impacts of its operations in the region. Basto said the Company would still be required to work with relevant departments to ensure necessary approvals were sought for individual projects, but the SEA takes a look at the Company's environmental plan over the long term in a more considered and complete way. (www.energy-business-review.com)

EDF sells 50 percent stake in two US wind parks to BlackRock

March 17, 2016. EDF Renewable Energy, EDF's renewable subsidiary in the United States (US), has closed a transaction to sell a 50% stake in two operational wind parks in the US to a fund managed by BlackRock Infrastructure. The two wind parks, namely 250 MW Roosevelt and 50 MW Milo wind parks, are adjacently located in Roosevelt County, New Mexico, and were commissioned in 2016. (www.enerdata.net)

Global emissions stable for second year as economy expands

March 16, 2016. Global carbon dioxide emissions were little changed for a second year even as economic output advanced, according to the International Energy Agency (IEA) data. Energy-related carbon dioxide emissions rose less than 0.1 percent to a record 32.137 billion metric tons, the IEA said. A decline in emissions in China and the U.S. was offset by increases in other developing Asian nations, the Middle East and a "moderate" gain in Europe, the IEA said. United Nations envoys agreed in December to try to limit global temperature gains to 1.5 degrees Celsius (2.7 Fahrenheit) from pre-industrial levels by boosting efforts to cut greenhouse gases blamed for climate change. Leading up to the UN climate summit in Paris that month, electricity from renewable sources including windfarms made up 90 percent of new power generation as global economic output rose 3.1 percent, according to the IEA data. In China, emissions declined by 1.5 percent as coal use dropped a second year, the IEA said. Coal generated less than 70 percent of Chinese electricity, 10 percentage points less than in 2011. U.S. emissions fell 2 percent as power utilities switched to natural gas from coal. (www.bloomberg.com)

UK plans $1.1 bn to support new clean-energy technologies

March 16, 2016. The U.K. government will provide 810 million pounds ($1.1 billion) for new clean-energy technologies, an effort that sharpens the Treasury's focus on ways to reduce pollution and ensure electricity supply. The Treasury allocated 730 million pounds by 2021 for as much as 4 GW of new offshore wind farms and other less-established renewable energy technologies, according to its annual budget. It also set aside 50 million pounds for research in energy storage devices and another 30 million pounds for a competition to build the some of the world's first small-scale nuclear reactors. The decisions set out by Chancellor of the Exchequer George Osborne in his annual budget are meant to keep alive the government's green commitments, which have been undermined by moves to slash support for renewables. Concerned that wind farms are blighting the landscape and solar installations boomed faster than forecast, the government has reined in subsidies for those technologies and emphasized commitments for offshore wind and nuclear plants. Osborne confirmed plans Energy Secretary Amber Rudd announced in November to hold three auctions by 2020 for new offshore wind-power capacity. That decision required the industry to reduce the costs of power it generates to 100 pounds a megawatt-hour. The first 290-million pound auction, which Rudd has said is scheduled for this year, will cap the price for offshore wind farms at 105 pounds per megawatt hour in 2011 and 2012 prices. Future auctions will tighten the cap to 85 pounds per megawatt hour for offshore wind farms due to be commissioned in 2026, the Treasury said. Developers including Vattenfall AB are gearing up to take advantage of the incentives. The Swedish utility this week started planning two 1.8 GW offshore wind farms near Norfolk, which are due to be commissioned in the 2020s. The 50 million pounds for research on energy storage will help companies work on stabilizing the national electric grid, which is having to cope with increasingly intermittent flows of renewable energy from wind and solar plants. The Department of Energy and Climate Change has also said it will work with energy regulator Ofgem to remove red tape holding back investment in energy storage. (www.bloomberg.com)

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