



Energy News

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The best anti-theft technology for coal is the market not physical devices!

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Mounting loss of discoms means mounting possibility of power cuts!

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**ANALYSIS /
ISSUES**

**DATA
INSIGHT**

**Volume XII
Issue 40**

18 March 2016

[WILL RENEWABLE ENERGY MAKE INDIAN POWER UTILITIES NON-RENEWABLE? (PART II)]

“Will the growing share of renewables make power utilities non-renewable? Though this is not an immediate problem for Indian utilities given the share of power from new renewable energy sources such as wind and solar are small, it may become a problem when the share grows or forced to grow...”

**[RENEWABLE
ENERGY /
CLIMATE
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- CIL crosses 500 mt production mark
- BHEL starts work at thermal unit at Anpara-D power plant

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- Expect more power cuts this summer
- Annual loss of discoms mount to over ₹ 600 bn in UP: CAG
- PGCIL approves ₹ 8.8 bn to boost transmission, capacity
- ₹ 11.5 bn paid as land compensation by CIL subsidiaries
- PM Modi to inaugurate power supply from Tripura to Bangladesh

Policy / Performance.....

- J&K joins UDAY discom debt plan
- AP may give nine-hour power to farm sector
- Coal India to get anti-theft technology in place by end April
- Govt to launch portal to ease procedure to lift coal
- Centre to fasttrack implementation of 3 hydro plants in Sikkim
- NPCIL in talks with US companies on nuclear reactors in Gujarat, AP

[INTERNATIONAL: OIL & GAS]

Upstream.....

- Transerv to retest Warro-4 well in WA's Warro gas field
- Sound produces 24 mn cubic feet of gas at Nervesa
- Australian Amadeus Basin project could hold trillions of cubic feet of gas
- Eni starts production at Goliat field
- Saudi oil output steady in February after preliminary freeze deal
- Apache with Shell to produce Egyptian unconventional gas in June
- US oil and natural gas drilling rig count at record low

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- Venezuela Paraguana refineries operating at half capacity
- KBR will modernise and expands Baku refinery
- Exxon Beaumont refinery expansion project on hold

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- New Israel-Jordan gas pipeline expected in 2017
- Total to begin Ugandan pipeline construction soon
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- Russia says Iran may join oil freeze after boosting production
- Argentina to subsidize oil exports to compensate for low prices
- Goldman Sachs cuts crude oil price forecasts for this year and next
- Oil price may have bottomed as high-cost producers cut: IEA
- Energy XXI says may file for bankruptcy if oil prices stay low
- Brazil oil measures could unlock \$120 bn in investments: Energy Minister
- Oil majors pay Mexico oil regulator \$80 mn for deep water data

[INTERNATIONAL: POWER]

Generation.....

- CPV and GE secure financing for 785 MW power plant in US
- Protests disrupt Bangladesh power-plant plan
- Kansai Electric shuts down Takahama-3 nuclear reactor

Transmission / Distribution / Trade.....

- ABB to support future intelligent transmission network substation project in UK
- Sri Lanka's island-wide blackout signals power supply reliability issue
- New unit of Ingula hydropower project linked to South Africa's grid
- Japan boosts energy distribution programme with \$18.4 mn

Policy / Performance.....

- Bolivia plans to invest \$18.5 bn in its energy sector by 2020
- European Commission approves French-Chinese deal to build \$25.5 bn nuclear project in UK

[RENEWABLE ENERGY / CLIMATE CHANGE TRENDS]

NATIONAL.....

- Goyal wants Africa to join ISA club in clean energy drive

- Haryana aims to install solar plants to replace old thermal plants
- Govt's thrust area will be renewable energy over next 7 yrs: Goyal
- RattanIndia Solar bags 50 MW solar project in Allahabad
- India opens market for solar battery makers such as Tesla
- 50 rail coaches lit up by solar panels being made in Jodhpur
- GST poses a big risk for Indian solar industry
- Banks, NBFCs to finance 76 GW clean energy projects
- 'Methane gas plant being built on lake without consent'
- 'Clean environment cess to make solar power more competitive'
- Tata Power unit inks pact to acquire IRRJL wind project

GLOBAL.....

- Japan signs off on climate change plan to meet Paris targets
- UK may weaken green reporting rules in Osborne's budget
- Poland hardens opposition to stricter European climate policies
- Japan Ministry fund to invest in 14 MW JWD wind project
- Obama finds common cause on climate change with Canada's Trudeau
- France to weigh EU carbon price corridor in global pricing push
- Wermuth bets on greens as Merkel cools to solar, wind subsidies
- Hergo Sun Japan completes solar power plant in Japan
- Alberta to form oil-sands advisory to help implement CO₂ policy

COMMENTS.....

Will Renewable Energy Make Indian Power Utilities Non-renewable? (Part II)

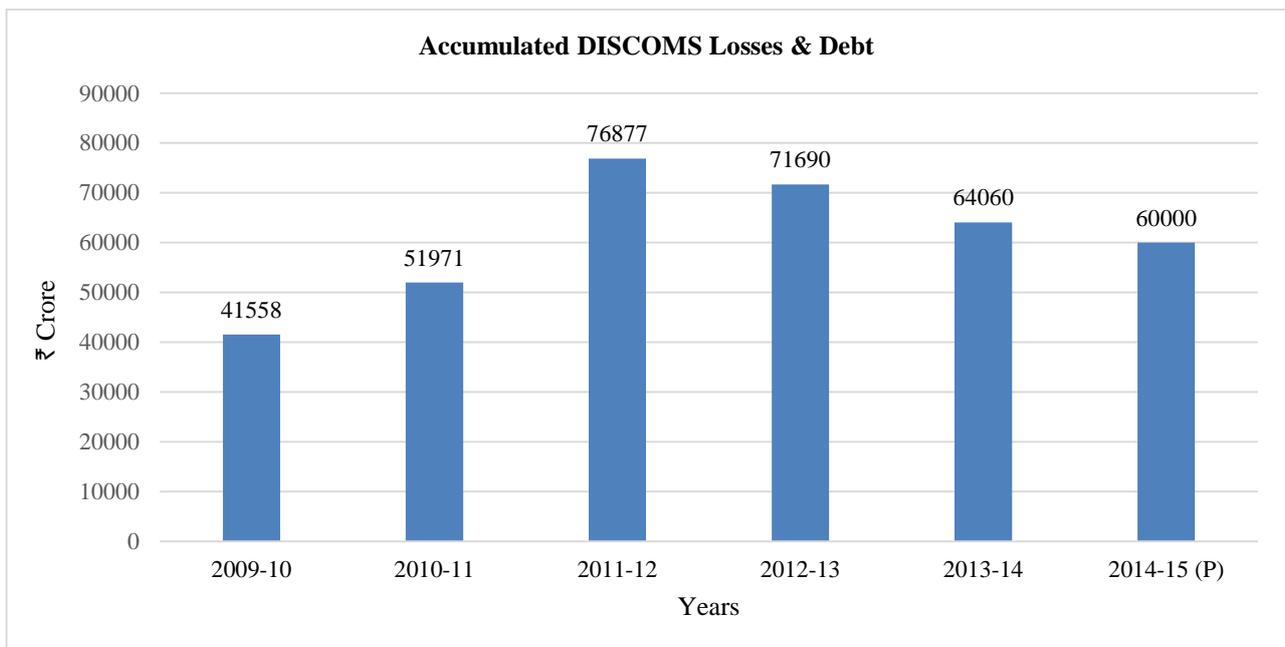
Lydia Powell and Akhilesh Sati, Observer Research Foundation

Continued from Volume XII, Issue 39

Part I of this column ended with the statement that state governments that sign up to the UDHAY scheme will have little or no incentive to accommodate large volumes of renewable energy. It also commented that the complexity of accommodating large quantities of renewable energy is neither understood nor acknowledged by policy makers and solar energy enthusiasts. Part II will seek to justify this sweeping remark.

According to the government press release on the UDHAY scheme the accumulated losses of Indian distribution companies is estimated to be about ₹ 3.8 lakh crore (\$61 billion) and out-standing debt of about ₹ 4.3 lakh crore (\$69 billion) as of March 2015. The primary reason for such large accumulated losses is stated to be the growing gap between cost of service (of supplying electricity) and the revenue realised. State governments that sign up to the UDHAY scheme and the distribution companies (discoms) that they control must strive to decrease this gap through better technical and commercial efficiency.

Chart 2



P: Projection based on provisional reporting by States

Source: Ministry of Power, Coal and New & Renewable Energy

The press release observes that 'financially stressed discoms are not able to supply adequate power at affordable rates which hampers quality of life and overall economic growth and development'. One cannot disagree with this observation but we must also ask 'affordability for whom?' If affordability refers to the poor rural household consumer then 'affordable rates' must mean low tariffs. If affordability refers to distribution companies (which are now being asked to demonstrate commercial viability in a market environment as per the UDHAY scheme) affordable rates means high tariffs. How this contradiction will be resolved is not clear.

The overall high cost of accommodating large volumes of solar energy on the grid must be recovered either through the tax payer or the rate payer. Unlike the German rate payer, the average Indian rate payer is unwilling to pay higher tariff for power even if it comes with the label 'clean'. This is understood well by politicians if not policy makers. For example the budget for 2016-17 increased the cess on domestic coal from ₹ 200/tonne to

₹ 400/tonne supposedly to fund clean energy programmes. The day after the budget was released, the Minister in charge for Power had to issue a 'clarification' that the increase in cess on coal will not result in increase in tariff for power. How this will be achieved was left unexplained. Laws of economics would require that an increase in fuel costs translate into an increase in tariff. In theory, a dramatic improvement in commercial and technical efficiency in distribution of electricity can accommodate an increase in the cost of fuel (coal) without an increase in tariff. But in practice improvement in efficiency in the distribution segment have proved to be difficult if not impossible.

In Delhi where a private-public partnership arrangement is in place for distribution, a decrease in the gap between cost of supply of electricity and the revenue realised has been achieved primarily through an increase in tariff and not through an increase in efficiency. Delhi has little or no agricultural or industrial electricity consumption. Over 80% of consumers are households. This means that it is probably one of the least difficult Indian states for improvement in efficiency in the power sector. If efficiency initiatives are difficult to implement in Delhi it will be even more difficult to implement in the rest of India which have agricultural consumers and over 70 different tariff slabs on average.

Returning to the press release on the UDHAY scheme, there is a statement that 'efforts towards 100% electrification, 24X7 power supply and clean power cannot be achieved without performing discoms'. This is a statement that we cannot contest but there are inherent contradictions in the three objectives listed. 100% electrification and clean power are to be met by state (central government) led interventions while 24X7 power supply is to be achieved by market oriented distribution companies owned by state (regional) governments. 100% electrification has been historically driven by publicly funded programmes under various names such as the minimum needs programme (early 1980s), Kutir Jyoti programme (late 1980s and early 1990s), Rajiv Gandhi Grameen Vidyutikaran Yojana (2000s) and the Deen Dayal Upadhyaya Gram Jyoti Yojana, (new name for the Rajiv Gandhi scheme given by the current government).

The primary mandate for these schemes has been to erect infrastructure for electricity access in rural India. Once basic infrastructure such as distribution transformer and distribution lines are provided in the inhabited locality as well as the dalit bastis (areas segregated for lower castes in a village), electricity is provided to public places like schools and health centres and at least 10% of households access electricity (for how long is not specified by the official definition of electrification), the village is declared as electrified and the central government role in providing electricity access literally ends. The responsibility of supplying power 24X7 through this infrastructure now shifts to the regional government owned discom that is being asked to follow market signals under the UDHAY scheme. If the discom does follow market signals, it would prefer to cut off supply to rural households with low loads and little or no revenue potential.

The last objective of clean energy is a state (primarily central government) driven intervention. This is also an intervention that the distribution companies would rather ignore if they are to follow market signals as explained in Part I of this column. The cheapest way for discoms to meet constraints imposed on them by the UDHAY scheme is to provide no energy to poor rural households. Providing clean energy will make them worse off compared to providing 'dirty' energy. The press release on the UDHAY scheme says that 'default on bank loans by the financially stressed discoms has the potential to seriously impact the banking sector and the economy at large'. Distribution companies that sign up to the UDHAY scheme will not have access to short term borrowing from banks. This means that the only way in which distribution schemes can meet the goal of reducing the gap between cost of supplying power and revenue realised is by resorting to the 'power-outage' model – that of supplying no energy because the more energy they supply the more money they are likely to lose. In the absence of deep structural changes that will increase efficiency and in turn reduce costs this is the only option discoms have. This is where solar energy 'enthusiasts' are likely to rush in and say that this is a great opportunity for decentralised mini-grids to power rural households. We would like to pose the question: 'opportunity for whom'?

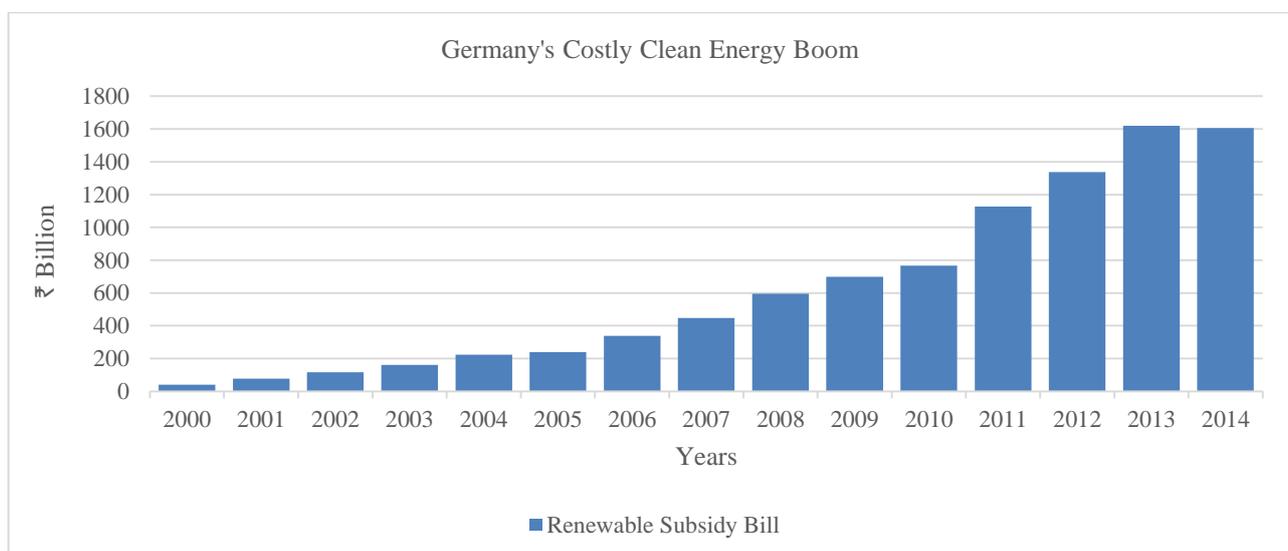
Installing solar panels in rural India, putting up a few bulbs and fans in a poor households and taking pictures of smiling families under solar panels is a great opportunity for those who are ideologically committed to solar energy to portray the victory of solar energy over rural poverty and dirty coal in India. But does it really have an impact on rural poverty and coal based grid power? Is it just a claim similar to that of the claim of 'electrification' in India which does not demand continuous supply of power to all households? What long term economically viable opportunity does it open up for a rural household especially if its fate is most likely to be that of the decentralised solar project of Green Peace in Bihar (see part I of this column)? If providing energy is the goal (as opposed to limiting carbon emissions) would it not make more sense to use efficient diesel generators in mini-grids as it is done in most islands?

Solar panels are not among the aspirational dreams of rural households. To get out of poverty; to have wage incomes from salaried jobs (*probably similar to the young people coming to rural areas from urban cities in India wearing fine clothes and holding tab computers - both manufactured from petrochemicals - to install and inspect their solar panels - made using fossil fuels and transported by petroleum fuels. These youngsters come to the village only because they know they can return to the coal fired comfort of their urban homes using the efficiency and speed of their petrol fired cars and this is what the rural poor want for their children*) rather than derive sustenance incomes from self-employment in their tiny agricultural plots; to have air-conditioners, televisions and fridges that run at the flick of a switch are among their aspirational dreams. These dreams may not be to the taste of the affluent 'other' who are infatuated by the idea reversing climate change but aspirations are by definition only the strong desire to imitate or become the powerful 'other'. As long as the powerful 'other' remains wedded to fossil fuel fired production and consumption, the poor are unlikely to conform to the aspirations of the affluent that the poor obey the laws of climate change policy that they conveniently ignore. We will leave this bit of digression at his point and return to the question posed by the title of the column.

Will the growing share of renewables make power utilities non-renewable? Though this is not an immediate problem for Indian utilities given the share of power from new renewable energy sources such as wind and solar are small, it may become a problem when the share grows or forced to grow.

Increasing penetration of renewable energy in Germany is flattening the intra-day price curve. This means that the gap between the peak and non-peak prices in a day is growing small (See Chart 3). The gap is reported to have fallen from 3 to 1 in the last decade. As pointed by a recent paper, the irony is that the energy sources with the highest overall costs (solar) is reducing overall prices of electricity.

Chart 3



Note: Euro to Rs conversion- by taking values at the end of each year from Xe.com

Source: Bloomberg

In India there is no 'time of the day' pricing and so this has flattening of the price curve is not yet materialised into a major problem but the fact that increasing share of renewables can reduce overall tariff and yet at the same time increase overall costs for distribution companies is an issue that Indian discoms under the UDHAY medication must take note of. The celebration of low prices quoted in solar auctions in India should send shivers down the spines of discoms under the UDHAY scheme. As the volume of renewable energy grows, the tension between policy driven renewable energy and market driven discoms could grow. This will mean that all that renewable energy will counter the impact of UDHAY and make Indian discoms non-renewable in the long run.

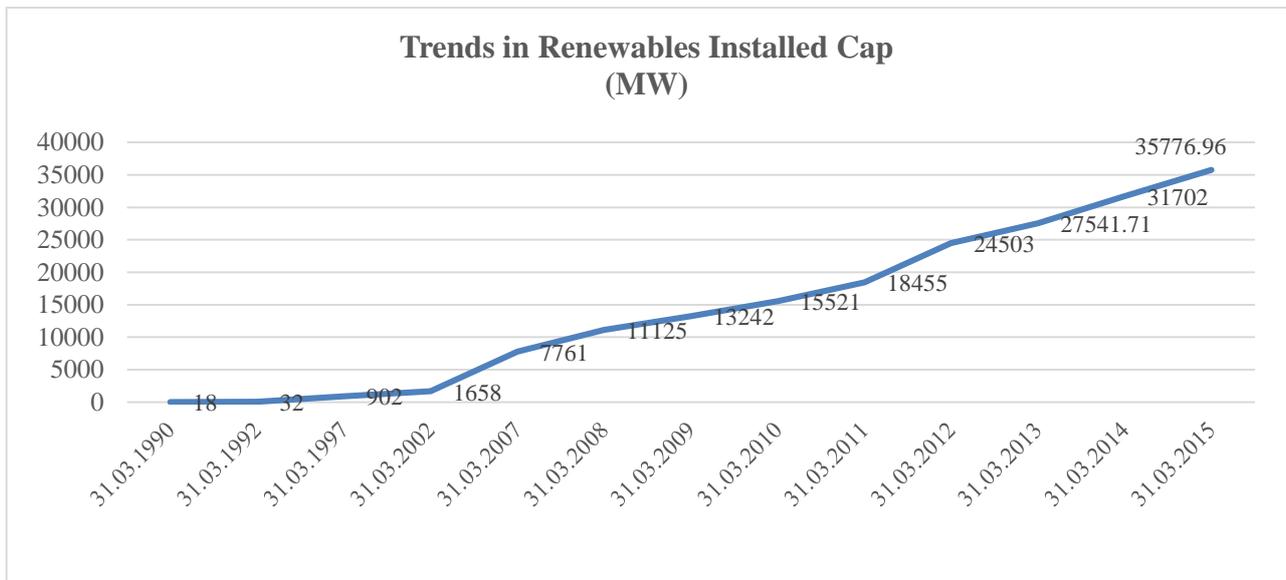
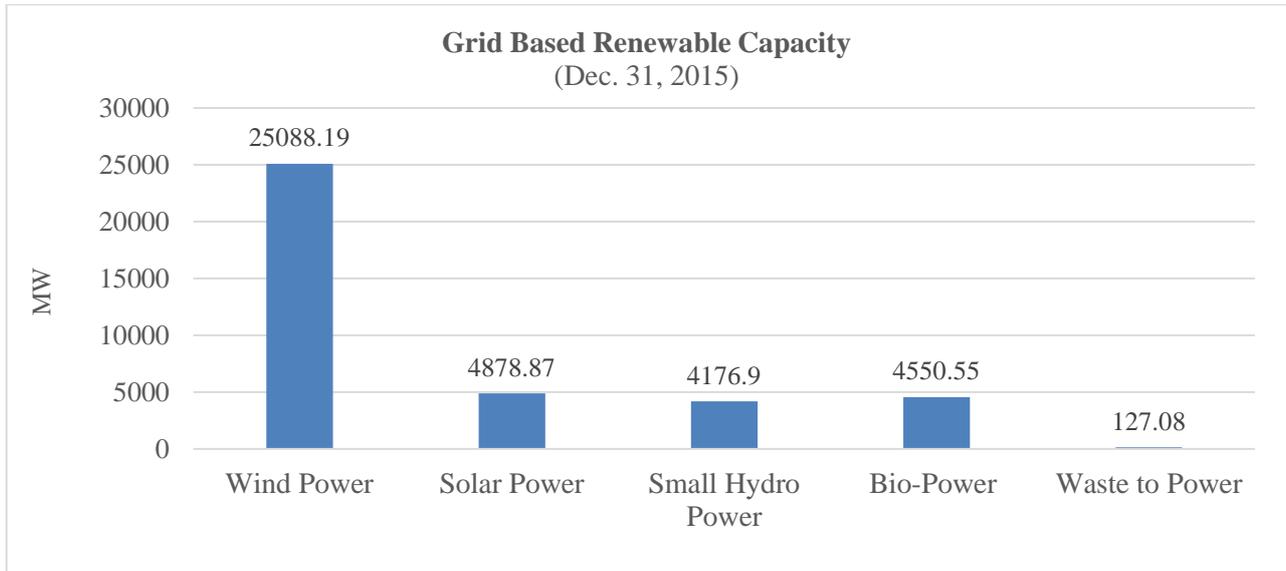
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Views are those of the authors

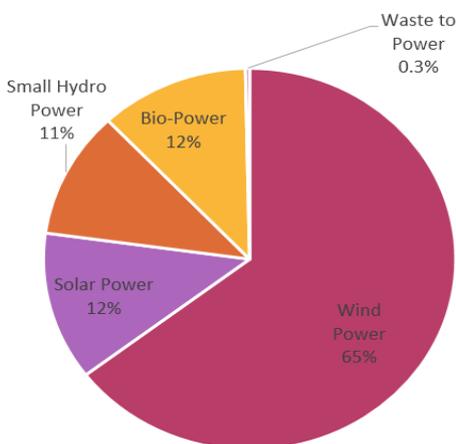
Authors can be contacted at lydia@orfonline.org, akhileshs@orfonline.org

Renewables Scenario in India

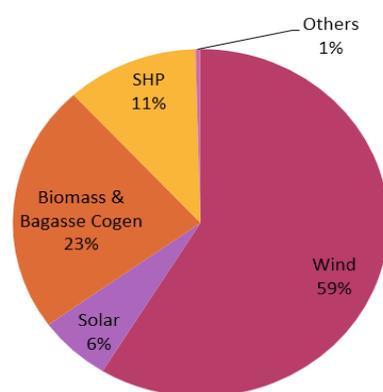
Akhilesh Sati, Observer Research Foundation



**Installed Capacity- 38.82 GW
Dec 2015**



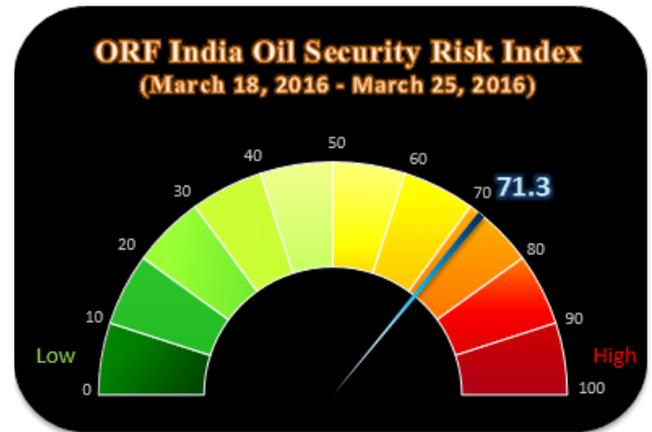
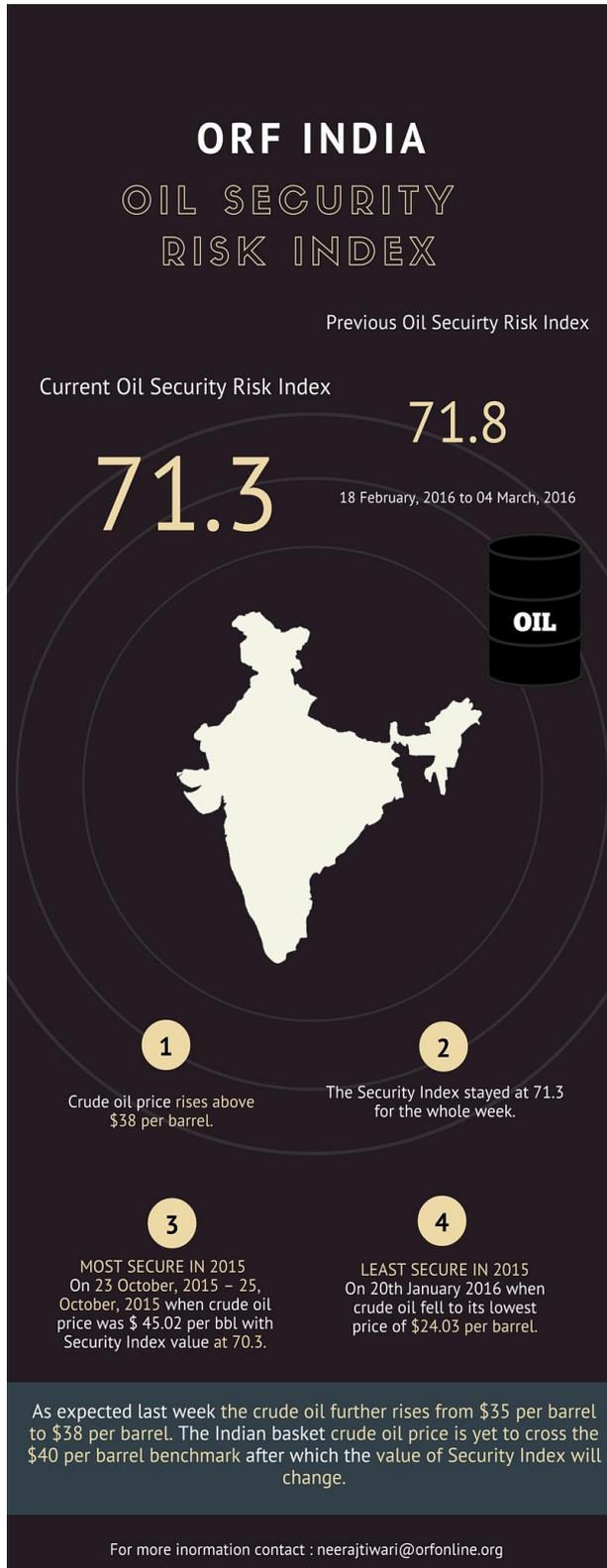
**Renewables Generation 2013-14
53.22 BU**



Source: CEA, MNRE & Press Information Bureau

Indian basket crude oil price above \$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.....

Cairn India hopes for early resolution on Rajasthan block

March 15, 2016. Cairn India has expressed the hope that recent Cabinet approvals for changes in the natural gas sector will also help resolve some of the long pending issues with the government, such as the fate of its Rajasthan fields and a 'fair price' for its crude oil. A major decision taken by the Cabinet was to approve the Hydrocarbon Exploration and Licensing Policy, a main facet of which involves granting explorers a uniform licence for the exploration and production of all forms of hydrocarbons. (www.thehindu.com)

ONGC mulls drilling nine development wells in 2 fields

March 14, 2016. Oil and Natural Gas Corp Ltd (ONGC) is planning to undertake drilling of nine development wells in KG-OSN-2004/1 and GS-49-2 fields beside creation of other infrastructure in KG Basin with an investment outlay of ₹ 3,750 crore. According to the minutes of meeting of Expert Appraisal Committee (EAC) of Ministry of Environment and Forest and Climate Change held recently, the PSU sought ministry's nod to prepare Terms of Reference for the project. The project involves the Integrated Development of block KG-OSN-2004/1 and GS-49-2 field in KG Offshore involves constructing new onshore facilities, Drilling and completion of 7 new wells in KG-OSN-2004/1 and 2 new wells in GS-49-2 prospect, Subsea pipeline from offshore to new onshore terminal with a carrying capacity of 6.4 million metric standard cubic meter per day (mmscmd) of gas while the new onshore facility is to be constructed for 8 mmscmd of gas. In March 2005, ONGC acquired 90 percent stake and operatorship and subsequently acquired total 100 percent stake of the block. (indiatoday.intoday.in)

OVL steps up Vankor oil field play

March 11, 2016. ONGC Videsh Ltd (OVL) along with Indian Oil Corp (IOC), Oil India Ltd (OIL) and Bharat Petroleum Corp Ltd (BPCL) is in talks to buy about 35 percent additional stake in Russias Vankor oil field in Siberia for close to USD 3 billion. OVL had on September 4 last year agreed to buy 15 percent stake in Russias second-biggest oil field of Vankor from Rosneft for USD 1.26 billion. While the 15 percent deal is yet to be concluded, Rosneft is agreeable to selling a total of 49.9 percent in Vankor to Indian firms. Of the 49.9 percent stake offered, OVL will take 26 percent and the rest 23.9 percent will be split equally between IOC, OIL and Bharat Petro Resources Ltd (BPRL), a unit of BPCL. (indiatoday.intoday.in)

ONGC gets back Ratna & R-Series, Amguri oil fields

March 10, 2016. The government cancelled award of Ratna & R-Series oil and gas field to Essar Oil and Amguri oilfield in Assam to Canada's Canaro Resources and revert them back to Oil and Natural Gas Corp (ONGC). The Cabinet Committee on Economic Affairs (CCEA) decided to revert the fields to their original licensee after contract with Essar could not be concluded even after 20 years and the same with Canaro was terminated following the Canadian firm selling its stake without government consent. Essar Oil and Premier Oil of UK was awarded the Ratna and R-Series oil and gas fields, lying 130 km off the Mumbai coast, in December 1996 but the production sharing contract (PSC) could not be signed due to differences of rates of royalty and other issues. In 2010, the oil ministry had terminated the contract with Canaro as the Canadian company had not taken the government's consent to sell its controlling stake in the Amguri field and raise ₹ 430 crore from Barbados-based Mass Financial Corp. The Ratna and R-series oil fields hold an estimated 87 million barrels of oil and 1.2 billion cubic metres of gas reserves. ONGC had discovered the fields and created facilities in Ratna R-12, which is part of R&RS, at a cost of ₹ 472.55 crore. (www.dnaindia.com)

Downstream.....

Pertamina looks to Indian refiner to process crude oil

March 15, 2016. Indonesian state-owned energy company Pertamina hopes to seal a deal this year with an Indian refiner to process around one million barrels of Iraqi crude oil each month, Pertamina Chief Executive Officer Dwi Soetjipto said.

Soetjipto declined to say which Indian refiner Pertamina was talking to on the oil processing deal. Pertamina's monthly Iraqi oil shipments to the Indian refiner would consist of 290,000 barrels from a stake in the West Qurna block and another 700,000 barrels it would purchase from other Iraqi oilfields, he said. Pertamina has about one million barrels per day of domestic refining capacity, which meets only about two-thirds of Indonesia's daily oil consumption. (www.business-standard.com)

HPCL, GAIL shortlist 3 sites in AP for 15 mt refinery

March 14, 2016. Hindustan Petroleum Corp Ltd (HPCL) and GAIL (India) Ltd have shortlisted three sites in Andhra Pradesh (AP) for setting up a 15 million tonnes (mt) per annum refinery, Oil Minister Dharmendra Pradhan said. Financial appraisal of setting up the refinery-cum- petrochemical complex or just the petrochemical complex has also been carried out. The project schedule, he said, would depend on completion of detailed feasibility report, financial appraisal of the project and subsequent approvals. GAIL-HPCL are planning the petrochem project after their plans to team up with Frances Total, Lakshmi N Mittal Group and Oil India Ltd for a 15 mt a year refinery-cum- petrochemical plant at Visakhapatnam in Andhra Pradesh fell through as partners pulled out one after the other due to weak global demand. The 5-way alliance of HPCL, explorer OIL, gas utility GAIL (India) Ltd, Mittal Investment Sarl and Total in October 2007 had signed a Memorandum of Understanding to look at the feasibility of setting up the Vizag project. (indiatoday.intoday.in)

IOC's sales price slump to multi-year low

March 11, 2016. Indian Oil Corp (IOC) has sold up to 51,000 tonnes of naphtha for late March to early April at discount levels not seen in many years, traders said. IOC sold up to 24,000 tonnes of the fuel for March 28 to April 3 loading from Kandla to Thai firm PTT at discount in the high teens level to its own price formula on a free-on-board (FOB) basis. It sold another 27,000 tonnes for March 28-30 loading to Japanese Itochu at a discount of about \$7 a tonne to the same price formula. These could not be directly confirmed as IOC and its buyers do not comment on their deals. Traders said ample supplies were hurting sellers. Not only were Indian refiners hit but so were traders selling cargoes on a cost-and-freight (C&F) basis to North Asia. Taiwan's Formosa Petrochemical Corp for instance bought a total of 150,000 tonnes of open-specification naphtha for second-half April arrival at Mailiao at a discount of \$9.00 to \$9.50 a tonne to Japan quotes on a C&F basis. It had paid a discount of \$5 a tonne on February 25 for 100,000 tonnes of naphtha for first-half April delivery. Demand has been steady but supplies have been increasing due to shipments arriving in Asia from the West, including Europe and the Mediterranean. (economicstimes.indiatimes.com)

BPCL seeks Euro 4 diesel in rare move

March 9, 2016. Bharat Petroleum Corp Ltd (BPCL) is seeking 35,000 tonnes of Euro 4 diesel in a rare move to fill a supply void, traders said. The tender, which closes on March 14, is for a 20,000-tonne cargo to be discharged at Paradeep port on April 9-13, and the remaining 15,000 tonnes to be discharged at Ennore port during the same period. It is too early to determine whether BPCL will become a regular importer of the Euro 4 grade diesel, traders said, as it depends on price. But this mirrored an unusual move by Indian Oil Corp (IOC) early last year when it sought to import petrol to cater to growing demand as the fuel was more expensive to buy from local refiners. IOC went on to become a regular importer of petrol in 2015, adding to the supply tightness that affected the fuel last year. But its imports have slowed this year following the start-up of its Paradip refinery. Diesel supply, depending on grades, has been aplenty from Asia to Europe since last year, traders said. India plans to go straight to Euro 6 diesel (and petrol) by 2020 from the current Euro 4 fuels in major cities and Euro 3 fuels across the rest of the country in a move to combat pollution. BPCL owns refineries in Kochi and Mumbai. (timesofindia.indiatimes.com)

Transportation / Trade.....

Mozambique LNG discusses gas export with Indian companies

March 15, 2016. Mozambique LNG, Africa's largest energy development group, is in talks with Indian companies to supply Liquefied Natural Gas to the country. Hoyle, vice president LNG Marketing & Shipping at Anadarko Petroleum Corp of the US, a leading proponent of the project. Oil and Natural Gas Corp (ONGC), Bharat Petroleum Corp Ltd (BPCL) and ONGC Overseas Ltd, together holds 30 percent equity in the project. Hoyle, who addressed 200 delegates at the "LNG Supplies for the Asian Markets 2016" conference, leads the LNG marketing of the multi-party owned concession with a large deposit of natural gas reserves to support 50 million tons a year of LNG production at peak. Mozambique LNG is strategically

located close to India in terms of gas shipments, with one-way ship journey of to Northern India in seven days compared to 17 days trip to Japan, the world's largest LNG import market. The mega project, in various stages of developments, is expected to seek sales and purchase agreements (SPAs) with Asian LNG importers, including India. The project is expected to ship out first cargo from 2020. Mozambique LNG project will need strong support from its stake holders to work on the massive multi-billion dollar financing based on long-term SPAs with the Indian and Japanese markets. (indiatoday.intoday.in)

Policy / Performance.....

New policies to attract investments in O&G sector: S&P

March 14, 2016. ONGC plans to invest about ₹ 40,000 crore in its deep water field in the Krishna Godavari basin. The new price formula and calibrated marketing freedom for gas produced from fields in difficult terrain could help attract investments in India's oil and gas (O&G) sector, Standard & Poor's (S&P) Ratings Services said. Announcing the pricing freedom, the government also simplified the future auction process, proposing a revenue sharing model to replace the current profit sharing model. In addition, all exploration and production (E&P) activities will require just a single license, and bidders will be free to choose areas for exploration from among the fields up for auction. Some of the difficult fields are green field projects and many discoveries will need approvals for capital outlays and time to implement. Under the new formula, gas prices would be capped at the lowest of the imported cost of fuel oil, landed price of liquefied natural gas (LNG), or weighted average of imported price of coal, fuel oil, and naphtha. These prices will be reset semi-annually and will be applicable for future discoveries and existing discoveries that are yet to start commercial production. S&P said the new policy is credit positive for Oil and Natural Gas Corp (ONGC) over the long term but the rating on the company remains unaffected because of the time lag in the expected boost to cash flows and the financial burden of the possibly high budgeted capital expenditure for extraction from difficult fields. ONGC plans to invest about ₹ 40,000 crore in its deep water field in the Krishna Godavari basin. The expected increase in prices under the new mechanism could prompt ONGC to speed this up, with production expected to start in fiscal 2019. S&P said Reliance Industries Ltd (RIL) may need to withdraw litigation over certain ongoing pricing-related disputes with the government to benefit from the new pricing mechanism. S&P said at present, domestic gas prices are determined by a formula of average gas prices in gas surplus geographies. (www.dnaindia.com)

India oil demand seen 'taking off' as China crude growth fades

March 14, 2016. India is replacing China as the center of the world's oil demand growth as it's economy expands faster than any other major country and a growing middle class has more money to spend. India's oil demand grew by 300,000 barrels a day last year, double the average rate in the previous decade, according to a report by the Oxford Institute for Energy Studies. China's growth has slowed to 300,000 barrels from an average 500,000 barrels in the decade to 2013 as the government moves the economy away from heavy industry, according to the report. Since the turn of the century, China has guzzled oil as its economy expanded, helping drive up crude prices to above \$100 a barrel. A slowdown in this growth in the past few years and a surge in production from the U.S. to Russia and Saudi Arabia sent prices crashing to below \$30 a barrel, pummeling oil-producing nations' economies. For them, India is emerging as a new ray of hope for demand. As living standards improve, Indians are buying more cars and the government is looking to boost the share of manufacturing in the country's gross domestic product, which traditionally has been services-led. Diesel consumption increased 6.4 percent in the first 10 months of the financial year ending March 31 compared with the same period a year earlier, while gasoline use has risen about 14 percent, according to data from the nation's oil ministry. The International Energy Agency estimates India will consume 4.2 million barrels a day of oil this year, surpassing Japan's 4.1 million barrels. The South Asian nation briefly overtook Japan as the world's third-biggest oil consumer in the second quarter of last year. India's economy is estimated to grow 7.6 percent in the year ending this month, the highest among emerging markets. China expanded 6.9 percent in 2015, the slowest pace since 1990. Total vehicle sales rose 11.8 percent in February compared with a year earlier, according to the Society of Indian Automobile Manufacturers. The government expects the country's oil demand to increase 7 percent in the year ending March 31. (www.bloomberg.com)

Cairn India filed suit against govt to expedite pricing case: Agarwal

March 13, 2016. Lamenting that decision making in India could have been quicker, mining baron Anil Agarwal has said his company Cairn India filed a suit against government to "help" latter decide on price and tenure of Rajasthan oilfield

faster. Cairn India, a unit of Agarwal-led Vedanta Group, had in December filed a suit in Delhi High Court seeking direction to government to extend its contract for the prolific Barmer oil and gas block in Rajasthan as well as give a better price for crude oil produced from the block. With global oil prices dipping to a decade low, 25% discount is making things worse. The same indecision had plagued extension of Rajasthan oilfield licence beyond its current tenure ending 2019-20. Agarwal, who is Chairman of London-listed Vedanta Resources, said his company didn't want to go to the court and wanted things to be simplified. Agarwal said the current oil low price scenario is time to reflect how costs can be cut by bringing in better engineering and better products. (www.dnaindia.com)

India, Middle East countries in talks on oil-for-food scheme

March 11, 2016. India is in talks with some Gulf nations to buy oil to fill its strategic reserves and sell food in return, seeking to use its position as the world's third-largest oil importer to both secure energy supplies and boost exports. Indian Oil Minister Dharmendra Pradhan said the idea was still fluid, but New Delhi had held preliminary conversations with the United Arab Emirates (UAE). Prime Minister Narendra Modi and Abu Dhabi's crown prince, Sheikh Mohammed bin Zayed Al Nahyan, have discussed the issue twice, Pradhan said. India imports about four-fifths of its oil needs, with bulk of that supplied from the Middle East. A global supply glut has oil-rich countries there struggling to boost sales. Pradhan said India had offered the UAE a part of its Mangalore strategic reserves to store oil. Under the arrangement being proposed by the Indians, the Gulf state would be allowed to use about a third of that oil for trade, while keeping the rest for India to use as strategic reserves. India will complete the first phase of its strategic reserve to store 39 million barrels by May and later this year begin work on the second phase which will have a capacity to hold 91.6 million barrels, Pradhan said. (in.reuters.com)

RIL must withdraw arbitration if it wants gas pricing freedom: Govt

March 11, 2016. The government's move to free gas pricing for undeveloped gas fields in difficult areas will not apply to Reliance Industries Ltd's (RIL) KG-D6 finds unless the Mukesh Ambani firm withdraws arbitration challenging the government's authority to decide rates. The Cabinet headed by Prime Minister Narendra Modi had decided that the marketing freedom subject to a cap based on alternative fuel will not be applicable to discoveries that are under litigation or arbitration. RIL had in May 2014 dragged the government to arbitration challenging its decision not to implement the Rangarajan Committee recommendation of doubling rates to \$8.4 per million British thermal unit (mmBtu). RIL and its partners in KG-D6 block, BP of the UK and Canada's Niko Resources had in May 2014 taken the government to arbitration seeking implementation of a higher gas price. The government had in June 2013 approved a formula, linking prices of domestically produced gas with global benchmarks, which could have nearly doubled gas prices from the then prevalent \$4.20 per mmBtu from April 1, 2014. (www.dnaindia.com)

Indian reforms aim to unlock \$40 bn of oil and gas output

March 10, 2016. India said it hoped to unlock gas and oil resources worth almost \$40 billion by simplifying licensing rules and offering price incentives to recover gas from difficult offshore fields. Energy demand in India far outstrips consumption, but regulated low prices for gas from prolific but challenging deepwater fields have deterred investment in the sector. Under the reforms, companies will have more freedom to set the price of gas from new discoveries and existing finds not yet in production. But they will be subject to a ceiling price set according to the landed price of alternatives such as fuel oil, naphtha, coal and liquefied natural gas, Oil Minister Dharmendra Pradhan said. The ceiling price would be reviewed every six months. This will help boost gas output by at least 35 million metric standard cubic meter per day (mmscmd) for 15 years, equivalent to a total of 6.75 trillion cubic feet over that period, Pradhan said. India's current gas production is about 90 mmscmd. The move will benefit companies like Oil and Natural Gas Corporation, the country's top explorer, and Gujarat State Petroleum Corp, a government-run firm in the home state of Prime Minister Narendra Modi. ONGC said it wanted higher gas prices before it starts production from its east coast deepwater block. Reliance Industries, currently in a legal battle with the government over gas pricing, will have to either withdraw its case or wait for it to conclude before it can benefit from the new rules. India, which imports two-third of its oil needs, will also offer a common exploration license for different hydrocarbons like oil, natural gas, shale oil and gas and coal bed methane, in order to more quickly tap its vast resources. Pradhan said the new proposal would help reduce government intervention and could boost foreign investment in Indian oil and gas when global oil prices recover. India has also decided to extend the exploration licenses of 28 discovered oil and gas fields, awarded mainly to ONGC and Oil India, without bidding.

India eases gas prices in bid to seek \$27 bn investment

March 10, 2016. India announced steps to attract investment in the nation's oil and gas industry to help meet Prime Minister Narendra Modi's goal of cutting import dependence. The nation's cabinet approved measures including giving pricing freedom to explorers for natural gas extracted from deepsea fields that start production this year, except those under litigation, according to the oil ministry. The step will help boost gas output by 35 million standard cubic meters a day and unshackle projects worth ₹ 1.8 trillion (\$27 billion), Oil Minister Dharmendra Pradhan said. Modi has made energy security a priority for the country, which imports most of its oil and gas. The initiatives may attract companies such as Exxon Mobil Corp., Chevron Corp. and Royal Dutch Shell Plc that have stayed away from India's exploration-block auctions since they began in 1999. The country should incentivize gas production from deepwater, ultra deepwater and high pressure, high temperature areas, which haven't been exploited because of cost and risk, Finance Minister Arun Jaitley said. The gas price will be capped according to a formula linked to four alternate fuels -- liquefied natural gas, fuel oil, naphtha and imported coal. The price will be revised every six months, Pradhan said. The government also announced market rates for gas extracted from 69 small fields scheduled for auctions this year. Local producers such as Oil and Natural Gas Corp (ONGC) had sought higher prices as the current gas tariff is too low to support the cost of exploration and production in deepwater areas. India had reduced the price of locally produced gas by 18 percent for the six months beginning Oct. 1. The price, which is due for revision April 1, is expected to fall further due to a decline in international rates, hurting producers including ONGC, Oil India Ltd (OIL) and Reliance Industries Ltd (RIL). (www.bloomberg.com)

[NATIONAL: POWER]

Generation.....

Oldest Indian nuclear reactors near Mumbai may be shut down

March 15, 2016. India may shut two of its oldest reactors almost five decades after they went into operation as power tariffs aren't keeping pace with maintenance costs, according to Sekhar Basu, secretary at the Department of Atomic Energy. The first two reactors at Tarapur, about 100 kilometers from Mumbai at India's western coast, suffer frequent maintenance shutdowns that make them unprofitable, Basu said. They earn about 0.89 rupees (1 cent) for every kilowatt hour of electricity produced, which isn't enough to sustain operations. Nuclear plants in India received an average tariff of ₹ 2.78 per kilowatt hour in the year ended March 2015, according to the Department of Atomic Energy. Basu didn't provide details on the timing of a possible decommissioning, a process that can take decades and generate thousands of tons of radioactive waste. Nuclear Power Corp., the nation's sole operator of nuclear power plants, may approach the electricity regulator for a tariff increase when operations become unsustainable, Basu said. The nation's older reactors, including the two at Tarapur, have gone through "significant" safety improvements based on periodic reviews, according to India's Atomic Energy Regulatory Board. Two other reactors, 540 MW each, started at Tarapur in 2005 and 2006. Tarapur 1 and 2 aren't capable of in-service inspections, like some newer reactors, and need to be cooled down for safety inspections, which are frequent, Basu said. One of the two reactors has been offline since Sept. 2015, according to Central Electricity Authority report. The reactors are under International Atomic Energy Agency's safeguards and run on imported uranium. (www.bloomberg.com)

CIL crosses 500 mt production mark

March 14, 2016. Coal India Ltd (CIL) said it has crossed half-a-billion tonnes of coal production for the first time in a fiscal. CIL is eyeing to double its production to one billion tonnes by 2020. CIL said that it has an offtake of 504.09 million tonnes (mt), registering a growth of 9.4 percent compared to last year same period as on March 13, 2016. CIL, which accounts for over 80 percent of the domestic coal production, is eyeing 550 mt in the ongoing fiscal. (economictimes.indiatimes.com)

BHEL starts work at thermal unit at Anpara-D power plant

March 10, 2016. BHEL has successfully commissioned the second 500 MW thermal unit at Anpara-D thermal power plant (TPP) in Sonbhadra district of Uttar Pradesh, the company said. The state own company has added 2,320 MW of generating capacity in Uttar Pradesh in the current fiscal, it said. BHEL was given the contract for setting up two units of 500 MW each at Anpara-D TPP by Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd (UPRVUNL). The first 500 MW unit of the project was earlier commissioned in June 2015. (www.newkerala.com)

Expect more power cuts this summer

March 15, 2016. Delhi Transco Ltd warned of outages this summer as critical capital projects had not taken off due to lack of sufficient funds. It criticized the two Reliance-backed discoms, BSES Rajdhani (west and south Delhi) and BSES Yamuna (east Delhi), for not paying their dues, and said a serious system failure loomed large this year because essential maintenance on transmission lines had not been possible due financial constraints. The power utility said that despite the Supreme Court ordering BSES thrice to pay its current dues of ₹ 769.79 crore, the two power distributors had not done so. The Supreme Court will next hear DTL's contempt petition in this regard on April 4. (timesofindia.indiatimes.com)

Annual loss of discoms mount to over ₹ 600 bn in UP: CAG

March 13, 2016. The accumulated loss suffered by power distribution companies in Uttar Pradesh (UP) increased to ₹ 60,101.98 crore in 2013-14 from ₹ 33,600 crore in 2011-12, the Comptroller and Auditor General (CAG) of India said in its latest audit report. Slamming the UP Power Corp Ltd (UPPCL), the CAG in its report on public sector undertakings said the UPPCL failed to improve the financial health of these discoms because of incorrect ascertainment of the eligible short term liabilities. This led to drawing of larger amount of short term loans of ₹ 9,182.46 crore by UPPCL from banks and financial institutions which overburdened the discoms to the extent of ₹ 4,591.23 crore with liability of interest of ₹ 843.64 crore payable thereon during the 2013-14 and 2014-15, the CAG report for the year ended March 31, 2015 said. The report said that in violation of mandatory conditions of the scheme, the state government did not release the arrears of the subsidy of ₹ 10,445.29 crore and electricity dues of ₹ 1,131.26 crore as on March 31, 2012 to the discoms. It also said that non-compliance of mandatory conditions by the UP government, UPPCL and discoms led to ineligibility of the state government for capital reimbursement support of ₹ 3,952.59 crore from the Centre. Besides, non-reduction in the gap between average cost of supply and average revenue realised during 2012-13 and 2013-14 by the discoms deprived them of incentive for liquidity support of ₹ 1,377.76 crore from the Centre. (www.business-standard.com)

PGCIL approves ₹ 8.8 bn to boost transmission, capacity

March 10, 2016. Power Grid Corp of India Ltd (PGCIL) said its board has approved a total investment of ₹ 885 crore in projects to strengthen transmission and augment transformation capacity. The board of directors at its meeting gave "investment approval for augmentation of transformation capacity at Mainpuri and Sikar at an estimated cost of ₹ 76.48 crore, with commissioning schedule of 24 months from the date of investment approval". The nod was given for transfer of entire equity held by Power Grid Corp in Power System Operation Corp Ltd (POSOCO) to the central government at the agreed purchase consideration. (indiatoday.intoday.in)

₹ 11.5 bn paid as land compensation by CIL subsidiaries

March 10, 2016. Over ₹ 1,100 crore has been paid as compensation by various subsidiaries of Coal India Ltd (CIL) for acquiring land in different parts of the country in 2014-15, Coal Minister Piyush Goyal said. Observing that a total of ₹ 1,159.96 crore was paid as compensation by CIL, Goyal said that ₹ 840.68 crore has been paid in 2013-14 by Eastern Coalfields Ltd, Bharat Coking Coal Ltd, Central Coalfields Ltd, Northern Coalfields Ltd, Western Coalfields Ltd, South Eastern Coalfields Ltd and Mahanadi Coalfields Ltd. Goyal said in all the subsidiaries of CIL, employment against land has been provided as per the R&R policy of CIL 2012, except in Mahanadi Coalfields Ltd where R&R policy of Odisha state government has been considered. (www.moneycontrol.com)

PM Modi to inaugurate power supply from Tripura to Bangladesh

March 9, 2016. Prime Minister (PM) Narendra Modi will inaugurate 100 MW power supply by remote control from Tripura's Palatana project to Bangladesh on March 23. Tripura Power and Communication Minister Manik Dey said there would not be any formal function in the state to mark the occasion as the entire programme would be held through video-conferencing. Meanwhile, pricing of one unit of power was fixed at ₹ 5.5 in a meeting between Tripura Power Minister Manik Dey and Bangladesh Minister of State for Power Nasirul Hamid in Dhaka. Power Grid Corp of India Ltd (PGCIL) erected 47 km long 400 kv double circuit transmission lines from Suryamaninagar powergrid near here to Comilla in Bangladesh. The 726 MW gas based thermal power project at Palatana in Gomati district is run by ONGC Tripura Power Corp (OTPC). (indianexpress.com)

J&K joins UDAY discom debt plan

March 15, 2016. Jammu and Kashmir (J&K) become the ninth state to join the central government's Ujwal Discoms Assurance Yojana (UDAY) scheme for restructuring state distribution companies' (discoms) accumulated debts. Others that have joined UDAY till date are Rajasthan, Uttar Pradesh, Chhattisgarh, Jharkhand, Bihar, Gujarat, Haryana and Punjab. J&K will benefit by approximately ₹ 9,800 crore by way of savings in interest cost, reduction in transmission losses, energy efficiency, coal reforms, among others, during the period of turnaround, said a union power ministry statement here. Joining UDAY would enable the state of to raise funds at a cheaper rate to clear outstanding discom dues of around ₹ 3,538 crore, which would entail an annual saving of ₹ 1,200 crore over four years on interest costs. (www.business-standard.com)

AP may give nine-hour power to farm sector

March 14, 2016. Andhra Pradesh (AP) Government is considering supply of power for nine hours to farm sector, Minister K. Atchannaidu said. The Minister said that the Government was bearing ₹ 3,186 crore on subsidy towards free power. He also said that instead of three time slots of power supply to pump sets from 4 a.m to 11 a.m, 11 a.m to 6 p.m., and 9 p.m to 4 a.m., farmers wanted it to be given in two time slots instead of supplying during the night. The proposal is under examination, he said. Another initiative would be to install quality 'five star' pump sets which cost double the conventional ones, but they would help in saving 30 percent of power. The Discoms were supplying quality pump sets to farmers free of cost and the amount could be recovered in three years through the power saved. Another 1.2 lakh new pump sets would be sanctioned under the NTR Jalasiri and applications had been invited. Steps were also taken to ensure quality power supply and prevent break down of transformers due to overload, he said. In the case of breakdown of transformers, standing instructions were given to the department to replace them within 24 hours. (www.thehindu.com)

Coal India to get anti-theft technology in place by end April

March 14, 2016. Coal India's measures to prevent theft by electronically "fencing" mining areas and fitting trucks with a GPS-based tracking system will be finished by the end of April, Coal Secretary Anil Swarup said. As much as a fifth of the state-run company's annual output is stolen, costing it up to \$1 billion each year and feeding a huge black market in the fuel. Coal India's modernisation plan includes tracking trucks and using Google maps to "fence" mines, which will alert managers if a truck diverts from its route. Swarup said that reducing the amount of coal stolen and improving the quality of coal sold were his top priorities. Last year, Coal India unit Mahanadi Coalfields blacklisted third-party contractors of 36 trucks, each carrying up to 17 tonnes of coal, after managers received telephone alerts of route violations that could have led to theft. Mahanadi has also installed CCTV cameras at shipment sites, hooked up trucks with satellites and fitted them with radio frequency identification tags to automatically transfer data to a control room at the company's headquarters. (in.reuters.com)

Govt to launch portal to ease procedure to lift coal

March 14, 2016. Seeking to address the issue of a fall in lifting of coal by medium and small scale industries, government is planning to launch a web portal on which consumers can place their requirements and get the supply by self-certification. Coal and Power Minister Piyush Goyal said the government has assessed the reasons for the fall, which include lack of sensitivity for small consumer and elaborate paper work. Goyal said this will not only enhance transparency but also establish control over state agencies not carrying out coal distribution properly. Medium and small scale industries whose requirement is less than 4200 tonnes per annum are required to take coal through agencies nominated by state governments. Under the New Coal Distribution Policy (NCDP 2007), the scope of coverage through state agencies was increased from 500 tonnes per annum to 4200 tonnes per annum. At present, there is no proposal to review and revise NCDP 2007 for supply of coal to small and medium industries, he said. (energy.economicstimes.indiatimes.com)

Centre to fastrack implementation of 3 hydro plants in Sikkim

March 13, 2016. Looking to put back on track three stalled power projects in Sikkim, the Centre will meet officials of the state government and PSUs to resolve issues hampering implementation of the proposed plants. The three stalled plants – Panan, Teesta VI and Rangit IV – in Sikkim have total generation capacity of 920 MW. The Centre is roping in the Sikkim government as the state has awarded these contracts and is also beneficiary of the projects. Teesta VI project of 500 MW

is being implemented by Lanco Teesta Hydro Power Pvt Ltd. The 300 MW Panan project is a joint venture of Sikkim government and Himagiri Hydro Energy Private Ltd. The state government was to infuse 26 percent equity in the project. It is almost stalled. The Rangit IV project of 120 MW capacity was awarded to Jal Power Corporation Ltd in 2004. The Power Ministry recently told Parliament that of 12th Plan hydro capacity addition target of 10,897 MW, capacity aggregating 4,371 MW is slipping, and 930 MW capacity is critical to commissioning during the Plan period (till March 31, 2017). Based on the current status of projects, the likely capacity addition during the 12th Plan is 6,755 MW, it said. (www.business-standard.com)

NPCIL in talks with US companies on nuclear reactors in Gujarat, AP

March 9, 2016. Nuclear Power Corp of India Ltd (NPCIL) is in talks with a number of American companies to set up nuclear power reactors in Gujarat and Andhra Pradesh. Minister of State for External Affairs V K Singh said the two sides are engaged in talks for construction of nuclear power reactors at Mithi Viridi in Gujarat and Kovvada in Andhra Pradesh (AP). In a significant move aimed at putting an end to the contentious nuclear liability issue and assuage suppliers concerns, India had ratified the Convention of Supplementary Compensation (CSC) for Nuclear Damage, marking an important step in addressing matters related to civil nuclear liabilities. India had submitted its Instrument of Ratification for the CSC to the International Atomic Energy Agency (IAEA). The Convention will come into force for India with effect from May 4, Singh said. The US had welcomed India's move saying the "important step" will facilitate participation by American companies in the construction of nuclear reactors in India. India had launched the nuclear insurance pool in June last year with a total corpus of ₹ 1,500 crore which will provide coverage for operators liability under the Civil Liability for Nuclear Damage Act, 2010. Besides the US, India had signed civil nuclear cooperation agreements with France, Russia, Canada, Namibia, Argentina, Kazakhstan, Republic of Korea, Czech Republic, Australia, Sri Lanka, United Kingdom and Mongolia, he said. Singh said India has all the credentials to become a permanent member in an expanded and reformed UN Security Council. (indiatoday.intoday.in)

[INTERNATIONAL: OIL & GAS]

Upstream.....

Transerv to retest Warro-4 well in WA's Warro gas field

March 15, 2016. Transerv Energy announced that both Warro-5 and 6 wells in permit RL-7 in Western Australia's Warro gas field continue to flow naturally and that Warro-4 will be re-tested. Warro-5 gas flow rate is presently averaging 0.5 million cubic feet per day with an accompanying water rate of 220 barrels of water per day (bwpd). Warro-6 gas flow rate is presently averaging 0.59 million cubic feet per day with an accompanying water rate of 225 bwpd. Production testing of Warro-5 and 6 has now been proceeding for over a month. During that time we have learnt much about the reservoir performance and the capability of the wells to produce gas. (www.rigzone.com)

Sound produces 24 mn cubic feet of gas at Nervesa

March 14, 2016. Sound Energy revealed that it has produced 24.6 million cubic feet of gas at the Nervesa well in Italy since achieving first gas on February 3. The company said that it had completed planned static and dynamic profiles, which identified an initial reduction in well pressure, with an associated minor production of water, and suggested that not all perforated levels are yet in production at the well. After a further period of production at these levels, the company will complete a second static profile to confirm the level of pressure support. Sound also revealed that a 40 day drill program for the first Tendirara well is expected to commence in April 2016 and stated that it expects the final permission to drill the Badile exploration well in Italy later in March. (www.rigzone.com)

Australian Amadeus Basin project could hold trillions of cubic feet of gas

March 14, 2016. New Zealand and Australia focused oil exploration and development company Mosman Oil and Gas Ltd announced that its Amadeus Basin project in the Northern Territory of Australia holds trillions of cubic feet of recoverable gas. SRK Consulting (Australia) has finalised a report into the prospective resources contained in permit EP 145 which highlights the potential for both conventional oil and gas resources in proven reservoirs within the West Walker Anticline and unconventional gas resources in the Horn Valley Siltstone. The report outlines unrisks prospective resources of 12.44

billion cubic feet of conventional recoverable gas and 1.4 trillion cubic feet of unconventional recoverable gas within both plays. (www.rigzone.com)

Eni starts production at Goliat field

March 14, 2016. Eni has started production from the Goliat field, located within Production License 229 in the Barents Sea offshore Norway. Goliat, which is the first oil field to start production in the Barents Sea, which has a capacity of 1 million barrels of oil. Daily output at the field will reach 100,000 barrels of oil per day, according to the company. The field is estimated to contain reserves amounting to about 180 million barrels of oil. Production will take place through a subsea system consisting of 22 wells, of which 17 are already completed. (www.rigzone.com)

Saudi oil output steady in February after preliminary freeze deal

March 14, 2016. Saudi Arabia kept its crude oil production steady in February, pumping 10.22 million barrels per day (bpd), after the top oil exporter struck a preliminary deal with other producers to freeze output. Organization of the Petroleum Exporting Countries (OPEC) leader Saudi Arabia and non-OPEC member Russia, the world's two largest oil exporters, along with Qatar and Venezuela said last month they would freeze output at January levels to prop up prices if other oil-producing nations agreed to join the first global oil pact in 15 years. Saudi Arabia produced 10.23 million bpd of crude in January, close to a record high. Crude supplied to the market in February was around 10.4 million bpd. Kuwait produced 3 million bpd of oil in February, unchanged from January, while the United Arab Emirates (UAE) pumped 2.78 million bpd. In January, the UAE's output was 3.13 million bpd, according to data from the OPEC. Gulf OPEC members Kuwait and the UAE said they welcomed the deal to freeze output and would commit to it if other major producers took part. But OPEC's third-largest producer, Iran, plans to raise production after international sanctions against the country were lifted in January and has called the deal laughable. Iranian Oil Minister Bijan Zanganeh said Tehran would join discussions between other producers about freezing oil production after its own output reached 4 million bpd. (www.reuters.com)

Apache with Shell to produce Egyptian unconventional gas in June

March 13, 2016. Apache Corp and Royal Dutch Shell Plc plan to start producing unconventional gas from their joint venture in Egypt's Western Desert by the end of June as the country seeks to bolster output of the fuel to meet increasing domestic needs. The partners will start drilling the North African country's first unconventional gas well in a pilot project by the end of March, Apache Egypt Region Vice President and General Manager Thomas Maher said. Apache and Shell will drill two additional wells before talking with the government about full development of the field using horizontal drilling and fracking, he said. Shell, the contract operator, holds a 52 percent interest in the project, and Apache has 48 percent. The country's government is seeking new investments in natural gas to help alleviate an energy shortage that has led to lower production at factories, and to reduce bills for imported liquefied natural gas. (www.bloomberg.com)

US oil and natural gas drilling rig count at record low

March 11, 2016. The number of rigs drilling for oil and natural gas in the United States (US) has fallen to the lowest level since at least 1940, oil services company Baker Hughes Inc said, as energy firms continued to slash activity amid the deepest energy price rout in a generation. Combined rigs in the US oil and gas fields fell by nine to 480, overwriting a previous record low of 488 in April 1999, according to the closely-followed industry data. Energy firms have sharply reduced oil and gas drilling since the selloff in global crude markets began in mid-2014. Still, many analysts think the rig count will rebound later this year with signs that oil prices had bottomed in the last month after US crude hit a 12-year low of just around \$26 a barrel. Chevron Corp said it will add two rigs in the oil-rich Permian shale of West Texas in 2016, part of a bet that crude prices will rise this year. Morgan Stanley forecast North American exploration and production companies would cut spending on oil and gas rigs by over 50 percent in 2016 versus 2015, before increasing spending by over 40 percent in 2017 versus 2016. (www.reuters.com)

Downstream.....

Venezuela Paraguana refineries operating at half capacity

March 14, 2016. Venezuela's massive 955,000 barrel per day (bpd) Paraguana refining center was operating at around 470,000 bpd, with Amuay's fluid catalytic cracker still down. The roughly 645,000 bpd Amuay refinery was operating at

around 320,000 bpd, while the adjacent 310,000 bpd Cardon refinery was at 150,000 bpd. Venezuela's state-run oil company PDVSA has launched one of its largest oil tenders ever, seeking to buy some 8 million barrels of U.S. or Nigerian light crude for delivery from April through June. (af.reuters.com)

KBR will modernise and expands Baku refinery

March 11, 2016. Engineering, procurement and construction group KBR has been awarded a significant project management consultancy (PMC) Contract for the Heydar Aliyev Baku oil refinery modernization project in Azerbaijan. Under the contract, KBR will modernise the 6 million tonnes (mt) per year Heydar Aliyev refinery in Baku to meet Euro 5 standards for all products and will increase the refinery capacity by 25 percent to 7.5 mt per year. The US\$1 bn modernisation project is expected to be completed by late 2018. (www.enerdata.net)

Exxon Beaumont refinery expansion project on hold

March 10, 2016. Exxon Mobil Corp has put on hold a possible project to double the size of the company's 344,500 barrel per day (bpd) Beaumont, Texas, refinery due to cuts in capital spending because of falling oil prices. Since 2014, Exxon has been considering the addition of a third crude distillation unit that would increase the refinery's crude throughput capacity to between 700,000 and 850,000 bpd, making it the largest in the United States, by 2020. In July, Exxon had pulled together a group of experts at its Beaumont refinery to consider the crude unit addition. Exxon said it plans to spend \$23.2 billion on capital projects in 2016, down from \$31.1 billion in 2015. The company expects its 2017 capital budget will fall below the amount it spends this year. Currently, the largest United States refinery is Motiva Enterprises 603,000 bpd Port Arthur, Texas, plant. (www.reuters.com)

Transportation / Trade.....

New Israel-Jordan gas pipeline expected in 2017

March 15, 2016. Israeli gas company Israel Natural Gas Lines expects to commission its new gas pipeline in Jordan in 2017. The gas pipeline project is currently under construction in the Sdom area in the Dead Sea and will supply 1.8 billion cubic meters (bcm) of gas from the Tamar gas field to private customers in Jordan over a 10 year period. A second gas line will be built in the Beit Shean area to supply 45 bcm of gas from the Leviathan field to the Jordanian National Electric Power Company over a 15 year period; gas production from Leviathan is expected by the end of 2019. (www.enerdata.net)

Total to begin Ugandan pipeline construction soon

March 14, 2016. Total SA has funds to build a pipeline linking oil fields in landlocked Uganda with a port on Tanzania's Indian Ocean coast, the Tanzanian government said. The 1,410 kilometer pipeline will cost as much as \$4 billion and employ 1,500 people directly. Tanzania will benefit from the pipeline should companies prospecting in the center of the country and in Lake Tanganyika strike oil, Minister of Energy and Minerals Sospeter Muhongo said. Kenya, which has been trying to sign an agreement for Uganda's oil to flow through its territory, has dismissed assertions that the infrastructure would be routed through Tanzania. A link via Kenya could cost an estimated \$4.5 billion. Tullow, which has oil discoveries in Uganda and Kenya of around 2.3 billion barrels, would favor the route via Kenya. (www.bloomberg.com)

Iraq halts pumping oil from Kirkuk into Turkey pipeline

March 14, 2016. Iraq's North Oil Company stopped feeding a pipeline to Turkey with crude produced at fields it operates in the Kirkuk region. The order to halt pumping through the pipeline came from the oil ministry in Baghdad, the company said. North Oil is continuing to produce the crude, but storing it in Kirkuk instead of exporting it through the pipeline, the company said. The company normally exports 150,000 barrels a day through the pipeline that carries the crude to the Turkish terminal of Ceyhan, passing through territory of the Kurdish regional government. (www.reuters.com)

Policy / Performance.....

Russia says Iran may join oil freeze after boosting production

March 14, 2016. Iran may join other oil suppliers in freezing production after restoring its own output to levels before sanctions were imposed, Russian Energy Minister Alexander Novak said. Iran has "reasonable arguments" not to be constrained by the freeze for now, Novak said. Iran is seeking to boost production by 1 million barrels a day by June. Saudi Arabia, Russia, Venezuela and Qatar in February proposed an accord to cap oil output and reduce a worldwide surplus.

Crude prices extended gains after their initial meeting on Feb. 16 and have climbed more than 40 percent since slumping to a 12-year low in January. Prices may have passed their lowest point as shrinking supplies outside the Organization of Petroleum Exporting Countries (OPEC) and disruptions inside the group erode global oversupply, the International Energy Agency (IEA) said. Saudi Oil Minister Ali al-Naimi said that the process of devising a freeze agreement would continue with more discussions in March. Nigerian Petroleum Minister Emmanuel Kachikwu said that talks would convene in Russia on March 20. Novak said that a meeting could take place between March 20 and April 1 in Russia, Doha or Vienna, where OPEC has its headquarters. (www.bloomberg.com)

Argentina to subsidize oil exports to compensate for low prices

March 11, 2016. Exporters of heavy crude from Argentina will receive a \$7.50 per barrel subsidy from the government as long as international prices remain under \$47.50 per barrel, the energy ministry said. The policy, which applies to crude exports from the San Jorge basin in Patagonia, was announced as Argentina's new government seeks foreign investment to help jumpstart a stagnant economy. The basin produces 41,000 to 43,000 cubic meters of heavy crude oil per day. (www.reuters.com)

Goldman Sachs cuts crude oil price forecasts for this year and next

March 11, 2016. Goldman Sachs Group Inc lowered its crude oil price forecasts for this year and next year, saying prices need to remain low enough to ensure supply is reduced over time. The bank said it expects Brent prices to average \$39 a barrel in 2016 and \$60 a barrel in 2017, down from its previous forecasts of \$45 and \$62 a barrel respectively. Goldman also trimmed its 2016 West Texas Intermediate (WTI) price forecast by \$7 to \$38 a barrel, and its 2017 price forecast by \$2 to \$58 a barrel. Predicting a slower recovery into next year and sharper oil production declines in 2016, the bank said it does not foresee production hitting previous peaks until mid-2018. (www.reuters.com)

Oil price may have bottomed as high-cost producers cut: IEA

March 11, 2016. Oil prices may have passed their lowest point as shrinking supplies outside OPEC and disruptions inside the group erode the global surplus, the International Energy Agency (IEA) said. Production outside the Organization of Petroleum Exporting Countries (OPEC) will decline by 750,000 barrels a day this year, or 150,000 barrels a day more than estimated last month, the agency said. Markets are also being supported by output losses in Iraq and Nigeria, and as Iran restores production more slowly than planned following the end of international sanctions, it said. Oil prices have recovered 50 percent from the 12-year lows reached in January as U.S. shale production retreats and as some OPEC members led by Saudi Arabia reached a tentative accord with Russia to maintain output at current levels. This "freeze" deal, while currently supporting prices, is unlikely to have a substantial impact on markets in the first half of the year, the IEA said. (www.bloomberg.com)

Energy XXI says may file for bankruptcy if oil prices stay low

March 9, 2016. U.S. oil and gas producer Energy XXI Ltd may seek Chapter 11 bankruptcy protection as soon as if oil prices remain low and it fails to refinance its debt, the company said. Brent crude has rallied in recent weeks to above \$40 a barrel, but prices are still far below the \$60 per barrel break-even level for the Houston-based company. With some \$4 billion in liabilities as of Dec. 31, a bankruptcy filing by Energy XXI would be the second biggest energy-related failure since a prolonged slump in oil prices has put a slew of oil and gas producers at risk of default. (www.reuters.com)

Brazil oil measures could unlock \$120 bn in investments: Energy Minister

March 9, 2016. Measures to encourage oil and gas exploration in Brazil published in the official gazette could unlock \$120 billion in investments, Energy Minister Eduardo Braga said. The National Council of Energy Policy authorized the country's oil agency to extend the concession of oil fields auctioned off in 1998 and proposed the extension of a special customs regime for oil equipment known as Repetro. (www.reuters.com)

Oil majors pay Mexico oil regulator \$80 mn for deep water data

March 9, 2016. Oil companies have paid Mexico's oil regulator nearly \$80 million for seismic data ahead of an auction for deep water fields, suggesting robust interest in the tender despite a lasting slump in the price of crude. Thirteen companies, including Exxon Mobil, BP and BHP Billiton, have paid a total of 1.38 billion pesos (\$78 million) to date for licenses to use deep water data, according to a document from oil regulator. The deep water auction is part of the so-called Round One tender, fruit of an energy reform finalized in 2014 that ended a decades-long production monopoly of state-owned oil

firm Pemex. Companies will want to see contract fine print yet to be finalized by the government before deciding to bid. Oil companies already have spent an additional 346 million pesos (\$19.5 million) on bid packages for the deep water auction, according to the document. Global oil prices have fallen more than 70 percent in the past couple of years, prompting deep spending cuts across the industry and speculation that firms might pass on Mexico's potentially lucrative but costly deep water projects. (www.reuters.com)

[INTERNATIONAL: POWER]

Generation.....

CPV and GE secure financing for 785 MW power plant in US

March 14, 2016. Competitive Power Ventures (CPV) and GE Energy Financial Services have secured financing for the construction of 785 MW Towantic Energy Center project in Oxford, Connecticut, US. It is CPV's second project financing while the first is being acquired by Global Infrastructure Partners in May 2015. Meanwhile, Gemma Power Systems (GPS) has received approval to proceed with the work as part of an engineering, procurement and construction agreement signed with CPV for the proposed power plant. Planned to be developed in Woodruff Hill Industrial Park by the 2018, the dual-fuel combined-cycle electric generating facility will be powered by two of GE's 7HA heavy-duty gas turbines with a steam turbine and associated generators. Expected to generate electricity required to meet the power needs of approximately 800,000 US homes, the combined cycle plant will be fueled by natural gas via the Algonquin Interstate pipeline and will utilize ultra-low sulfur distillate as a backup fuel. (fossilfuel.energy-business-review.com)

Protests disrupt Bangladesh power-plant plan

March 14, 2016. Campaigners for clean energy force shelving of construction of coal-fired power station near Sundarban mangrove swamp. Protests in the southern Bangladesh province of Khulna have forced the postponement of government plans to build a coal-fired power station near the world's biggest mangrove swamp. Coal is the cheapest option to provide energy to Bangladesh's population of 160 million, a third of which has no access to electricity. (www.mwcnews.net)

Kansai Electric shuts down Takahama-3 nuclear reactor

March 14, 2016. Japanese power utility Kansai Electric has shut down the third reactor of its Takahama facility in Fukui Prefecture (Japan), following a provisional injunction from the Otsu District Court (Shiga prefecture) ordering the shutdown of units 3 and 4 of the plant. The 830 MW reactors 3 and 4 at Takahama were commissioned in 1985 and stopped in 2011 in the wake of the Fukushima disaster and KEPCO applied with the Nuclear Regulation Authority (NRA) in July 2013 to restart the units. The NRA approved a restart in February 2015, that was blocked by the Fukui District Court in April 2015 due to safety concerns about local evacuations in the event of a disaster. (www.enerdata.net)

Transmission / Distribution / Trade...

ABB to support future intelligent transmission network substation project in UK

March 15, 2016. ABB has been selected, along with other partners, to support the Future Intelligent Transmission Network SubStation project to design first digital substation in the UK. The project, which is operated UK-based electricity transmission and distribution network operator SP Energy Networks, aims to design a digital substation scheme in a bid to protect, monitor and control the transmission network in parts of Scotland. The project involves installation of fully integrated digital protection and control systems at two bays of the existing Wishaw 275kV substation in Scotland to enable improved system visibility, diagnostics and operation. (utilitiesnetwork.energy-business-review.com)

Sri Lanka's island-wide blackout signals power supply reliability issue

March 15, 2016. Sri Lanka's recent island-wide power blackout has raised concerns over the reliability of national power supply and its future. Issues are ranging from known areas such as the future of fossil and coal based power and renewable energy and to even more relatively new issues such as failing 'n-1' reliability criterion and related issues. These issues were discussed in detail at a public forum organized by the Public Utilities Commission of Sri Lanka on consumer rights. 'n-1' reliability criterion refers to instances where one transmission line goes out of service due to whatever reason; the remaining lines must be able to carry the total load. (www.lankabusinessonline.com)

New unit of Ingula hydropower project linked to South Africa's grid

March 14, 2016. South Africa's state-owned power utility Eskom has connected the third 333 MW unit of its 1,332 MW Ingula hydropower project to the South African grid. The R25 bn (US\$1.65 bn) peaking hydropower project is being built between Ladysmith and Harrismith in the Little Drakensberg and is expected to be completed by the end of 2016. Full operation is scheduled for January 2017. (www.enerdata.net)

Japan boosts energy distribution programme with \$18.4 mn

March 9, 2016. The governments of Rwanda and Japan signed a financing agreement, worth \$18.4 million (about Rwf 14 billion), aimed at boosting electricity distribution networks in the City of Kigali. The funds will specifically be injected in the construction of Ndera substation and the Murindi and Kabuga power-switching stations, both in Gasabo District, according to Claver Gatete, the minister for finance and economic planning. The fund will go toward procurement and installation of equipment at the two facilities, which will help stabilise energy distribution within the capital and surrounding areas. (www.newtimes.co.rw)

Policy / Performance.....

Bolivia plans to invest \$18.5 bn in its energy sector by 2020

March 14, 2016. Bolivian President Evo Morales has approved the Plan for Economic and Social Development 2016-2020, which includes US\$18.5 bn in investments. Bolivia plans to invest US\$5.85 bn in the power sector, to raise the installed capacity by 2,954 MW of hydropower, thermal and renewable capacities. The electrification rate is expected to reach 97% by 2020. (www.enerdata.net)

European Commission approves French-Chinese deal to build \$25.5 bn nuclear project in UK

March 11, 2016. The European Commission has approved the proposed deal between EDF and China General Nuclear (CGN) in support of the planned \$25.5 bn Hinkley Point C nuclear project in Somerset. As per the terms of the deal, CGN will acquire 33.5% stake in the power plant by investing €6 bn through its new company, known as General Nuclear International (GNI). The remaining stake will be owned by EDF, which is also considering potential investors for the project. The firm, however, intends to retain majority stake in the project. EDF plans to make a final investment decision on the Hinkley Point C project in the near future. Recently, the French and UK Governments expressed intent to give their support for the project, which is expected to meet 7% of the UK's electricity needs upon commissioning scheduled in 2025. (nuclear.energy-business-review.com)

[RENEWABLE ENERGY / CLIMATE CHANGE TRENDS]

National.....

Goyal wants Africa to join ISA club in clean energy drive

March 15, 2016. New and Renewable Energy Minister Piyush Goyal called upon African nations to join the International Solar Alliance (ISA) to promote the renewable source of energy across the globe. Exim Bank, the minister said, would explain the finer aspects of ISA to African governments and also work towards engagement of Indian companies for solar projects in Africa through the line of credit (LoC) route. He suggested that India and Africa should deepen partnerships for development of micro grids and off grids as part of efforts for realisation of UN's Sustainability Development Goals (SDGs) well before year 2030. (energy.economicstimes.indiatimes.com)

Haryana aims to install solar plants to replace old thermal plants

March 15, 2016. Haryana Power Generation Corp Ltd (HPGCL) is setting up a solar power plant at the site of a defunct thermal power plant in Faridabad. The power generator plans to set up the plant over 151.78 acres near Bata Chowk in the district that generated coal based energy in the past. HPGCL said that the process for auction of defunct plant and machinery has been initiated. He said the actual site of thermal plant will be retained and developed by the Haryana Urban Development Authority. Apart from Faridabad project, the HPGCL is also mulling to generate solar power on land in and around the four-aging coal based thermal power plant at Panipat. To reduce cost of power and maintenance, the Haryana government has decided to shut four of Panipat thermal plants. HPGCL has an installed capacity of 5300 MW, mainly from

a coal-based plant at Panipat, Yamunanagar and Hisar. Apart from the Faridabad project, four other aging and inefficient thermal power units at Panipat are also being shut down to cut the cost of power. The ministry of new and renewable energy has already approved a plan to set up a 500 MW solar power park in the state. The Haryana Energy Development Agency (HAREDA) has been asked to prepare the project report. Haryana has enticed investors, especially in renewable energy, during the recently held 'Happening Haryana' investment campaign. The state's renewable energy sector received investment proposals worth over ₹ 85,000 crore, mainly in solar energy. (energy.economictimes.indiatimes.com)

Govt's thrust area will be renewable energy over next 7 yrs: Goyal

March 15, 2016. Power and Renewable Energy Minister Piyush Goyal has said that for the next six-and-a-half years, the NDA Government's thrust will be in the areas of hydroelectricity and bio-fuels. Declaring renewable energy to be the future of India, Goyal said India has set itself an ambitious target of generating 175 GW of power by 2022 from renewable sources, includes 100 GW from solar, 60 GW from wind, 10 GW from biomass and 5 GW from small hydroelectric projects. India's current wind power capacity is around 25 GW, and a solar power generation capacity of 5 GW. (www.sify.com)

RattanIndia Solar bags 50 MW solar project in Allahabad

March 15, 2016. Rattan India Group firm RattanIndia Solar Ltd has won solar project of 50 MW capacity at Allahabad in Uttar Pradesh. According to the company, overall combined capacity of 440 MW was offered in this bid out of which 50 MW was for Allahabad. The land for the project will be provided by Uttar Pradesh. Earlier, RattanIndia had won 70 MW of solar project in Rajasthan through NTPC and 40 MW of solar project in Maharashtra through Solar Energy Corp Ltd (SECI). The group is also implementing 10 MW of grid connected solar rooftop projects on CPWD buildings in Delhi and West Bengal which includes important government buildings like The Supreme Court of India and Krishi Bhawan. (energy.economictimes.indiatimes.com)

India opens market for solar battery makers such as Tesla

March 15, 2016. India plans for the first time to include energy storage as a requirement when a solar project is tendered this month, opening what could become a significant new market to battery makers such as Tesla Motors Inc., Samsung SDI Co. and Panasonic Corp. The state-owned Solar Energy Corp. of India, which is responsible for implementing the government's green targets, will ask bidders to include a storage component in 100 MW of the 750 MW of solar capacity tendered in the southern state of Andhra Pradesh. The intention of the pilot program is to reduce fluctuations in electricity supply in order to make possible the transfer of clean energy between states. India's Prime Minister Narendra Modi has set a goal of 175 GW of clean energy by 2022. The Andhra Pradesh project include 15 minutes of storage each for two solar installations. Warehousing power is considered a crucial component of India's green targets. The requirement, if more broadly adopted, has the potential to invigorate the storage market because of India's outsized ambitions for the industry. It would give manufacturers the scale they need to help bring down costs of battery storage that are holding back wider adoption. Global battery makers are optimistic about the projects they can put together in India. Tesla sees an "exciting market opportunity" that it looks to expand in 2016, the Palo Alto-based company said. By 2020, about 11.3 GW of energy storage will be installed globally, equivalent to less than one percent of the total installed capacity of intermittent renewables, according to data. The energy storage market in Australia is forecast to double each year through 2018 as homes turn to the technology amid increasing electricity prices, according to a report from the industry researcher IHS Inc. At the same time, the renewable energy industry in India is concerned that the high cost of storage would make projects too expensive to develop, tipping the balance toward fossil fuels. The price paid for solar power in India fell to a record low of ₹ 4.34 (6 cents) a kilowatt-hour in auctions held in the state of Rajasthan in January, where a total of 420 MW of capacity was awarded. (www.bloomberg.com)

50 rail coaches lit up by solar panels being made in Jodhpur

March 14, 2016. Come March-end, and 50 rail coaches equipped with solar panels will be rolled out from the North Western Railway (NWR) workshop in Jodhpur. Fitted on the roofs of the coaches, the solar panels will power the tube lights and fans, but only in non-AC coaches. Once these 50 coaches start to run on a regular basis, it is estimated that the railways will reduce 239 tonnes in carbon emission, save 1,000 litres of diesel annually, which amounts to savings of ₹ 45 lakh. The cost of fixing these panels is estimated at ₹ 2.5 crore. With regular maintenance, the panels can be expected to function for about 15-20 years. Jodhpur and Delhi are the two cities where solar-enabled coaches are being produced. (timesofindia.indiatimes.com)

GST poses a big risk for Indian solar industry

March 14, 2016. Renewable sector, currently a beneficiary of several indirect tax exemptions, may be a big loser if goods and service tax (GST) is implemented since the bill proposes to revoke most of these exemptions, according to Bridge to India. Costs and tariffs are expected to rise by 12-20% as a result. GST is a key taxation reform as it seeks to simplify a complex maze of state and central taxes by subsuming these into a single tax levied at the point of consumption. According to reports the Bill could be passed by July 2016. If the bill is indeed passed as anticipated, it is expected to be implemented almost immediately. Bridge to India, a renewable analyst house, feels if GST is implemented, input cost or tariff will rise by anything between 12-20% in the sector and this would wipe out the pricing gains of the past two years. Costs would rise because at present there is no import duty or indirect tax is applicable on solar modules but under the new regime, GST of 17-20% would be payable thus increasing costs. Local value added tax (VAT) and other levies such as excise, entry tax and Octroi on solar modules and the complete system is around 5% in most states because of a slew of exemptions. The Ministry of New and Renewable Energy (MNRE) report estimates that the cost for all equipment used in a solar project -- solar modules, inverters, cables, batteries and structures will go up adding up to a differential of 12-20% from current levels. Bridge to India is of the opinion that the solar sector has a strong case for an exemption. The government has put strong focus on the sector to achieve a diversified set of policy goals including energy access, energy security and climate change mitigation. (energy.economicstimes.indiatimes.com)

Banks, NBFCs to finance 76 GW clean energy projects

March 10, 2016. Public as well as private banks and non-banking finance companies (NBFCs) have committed for financing renewable energy projects of 76,352 MW capacity with an outlay of ₹ 3.82 lakh crore. New and Renewable Energy Minister Piyush Goyal said these banks and financial institutions have supported projects of 25,318 MW capacity with sanctioned and released amount of ₹ 63,473 crore and ₹ 26,105 crore respectively, as on December 31, 2015 after giving the commitments. He said that efforts are also being made to mobilise funds for the renewable energy sector from multilateral and bilateral banks such as The World Bank, Asian Development Bank, National Development Bank and Asia Infrastructure Development Bank and are at various stages of approvals. According to the statement, financial assistance of USD 700 million from World Bank and USD 500 million from Asian Development Banks for solar parks is under consideration. Besides, these multilateral bodies will also one billion euros and over USD 1 billion for solar rooftops in India. Among public sector banks State Bank of India will be financing the largest capacities of 15,000 MW capacity with an outlay of ₹ 75,000 crore followed by IDBI bank (3000 MW). The 24 public sector banks will be financing projects of 31,649 MW with and outlay of ₹ 1,58,740 crore. Public sector NBFCs including IREDA, IIFCL, PFC and REC will finance renewable energy projects of 14,500 MW with an outlay of ₹ 72,500 crore. Private sector NBFCs -- L&T Infrastructure Finance Company and PTC India Financial Service will finance projects of 12,500 MW with an outlay of ₹ 62,500 crore. Private Banks will finance projects of 17,703 MW with an outlay of ₹ 88,515 crore. Goyal said that the inter-ministerial group approved 34,984.09 crore under the National Clean Energy Fund for renewable energy projects so far since the financial year 2011-12. The panel had approved ₹ 18,469.47 crore in the current fiscal compared to ₹ 12,000.17 crore in previous fiscal. (www.business-standard.com)

'Methane gas plant being built on lake without consent'

March 9, 2016. The Tamil Nadu Pollution Control Board (TNPCB) has informed the southern bench of the National Green Tribunal that the Pallavaram municipality had yet to obtain consent for constructing its methane gas project near Potheri lake. The Pallavaram municipality had encroached upon the southern portion of the lake and erected a sand bed in the middle of the lake for a methane gas project. After the tribunal directed TNPCB to inspect the site, it recently submitted an affidavit saying the municipality was constructing a 'bio methanation plant' that could treat upto five tonnes of garbage each day to produce methane gas to generate electricity. The TNPCB had changed its mode for filing application for consent and renewal since January 19, 2015 but the municipality did not file an application for establishment of the plant. So, consent for establishment was not provided to the local body, TNPCB said. (timesofindia.indiatimes.com)

'Clean environment cess to make solar power more competitive'

March 9, 2016. The Budgetary proposal to double the coal cess will make solar power more competitive by increasing the cost of the dry fuel, a report by Mercom Capital Group said, adding increased cost may pass on to consumers in the form of higher electricity bills. Renaming the Clean Energy Cess as Clean Environment Cess, Finance Minister Arun Jaitley in his Budget speech for 2016-17 had proposed to raise the cess on coal, lignite and peat to ₹ 400 per tonne from the current ₹ 200. Stressing that the accelerated depreciation will be reduced from 80 percent to 40 percent beginning in 2016-17, the

report said this reduction will mostly affect rooftop solar, some large-scale projects and the wind sector. It further said the World Trade Organisation (WTO) has recently ruled against India's domestic content policy for solar cells and modules which was originally filed in 2013. In the short term, this will affect manufacturers who are overly dependent on the Domestic Content Requirement (DCR) market. Mercom sees more than 4 GW in total solar installations for 2016, nearly 100 percent year-over-year growth from 2015 total of 2,133 MW. (www.moneycontrol.com)

Tata Power unit inks pact to acquire IRRJL wind project

March 9, 2016. Tata Power's arm TPREL has signed a pact with Indo Rama Renewables Ltd (IRRL) to acquire its 100 percent subsidiary Indo Rama Renewables Jath Ltd (IRRJL), which owns a 30 MW wind farm in Sangli District of Maharashtra. Tata Power said that with the acquisition of IRRJL, Tata Power's total generation capacity will increase to 9130 MW and its operational wind power generation capacity to 570 MW with wind turbines located across 5 states - Maharashtra, Rajasthan, Gujarat, Tamil Nadu and Karnataka. Tata Power Renewable Energy Ltd (TPREL) has 250 MW of wind projects under construction across Gujarat, Madhya Pradesh and Andhra Pradesh. The move to divest wind asset will provide an impetus to further grow polyester business of IRSL, the company said. (www.moneycontrol.com)

Global.....

Japan signs off on climate change plan to meet Paris targets

March 15, 2016. Japan's government signed off on a set of measures ranging from energy-saving steps to a broader use of hydrogen to reduce greenhouse gas emissions in a bid to meet the country's commitments made last year at the Paris climate meeting. The cabinet of Prime Minister Shinzo Abe is expected to approve the plan in early May after public comment, Environment Minister Tamayo Marukawa said. The goal is to cut emissions by 26 percent by 2030 using 2013 levels as a base. Japan will strengthen the development of innovative technologies, according to the plan, which also calls for local governments to compile their own measures. (www.bloomberg.com)

UK may weaken green reporting rules in Osborne's budget

March 15, 2016. Companies that favor mandatory environmental reporting are concerned Chancellor of the Exchequer George Osborne will loosen the rules in the U.K. when he presents his annual budget. Osborne may end a requirement for greenhouse-gas reporting for Britain's biggest companies after fellow Conservative Party lawmakers said the rules were onerous and led to job losses. Some of the U.K.'s biggest companies are stepping forward to defend the reporting standards, which were instituted in 2013 and intended to help them tackle climate change. (www.bloomberg.com)

Poland hardens opposition to stricter European climate policies

March 15, 2016. Poland adopted a resolution against stepping up European Union (EU) climate ambitions, hardening its opposition to stricter emission policies before negotiations about how the bloc's 28 member states should share the burden of cutting pollution in the next decade. The Law and Justice government said current EU greenhouse-gas reduction goals already require "huge investment effort" from Poland to modernize its energy sector. Europe has a binding target of lowering emissions by 20 percent by 2020 from 1990 levels. National leaders in the European Council agreed in October 2014 to a 40 percent cut by 2030, an aim that yet needs to be translated into detailed legislation. The resolution by Poland, which relies on coal for more than 80 percent of its electricity production, comes after EU nations including Germany and Luxembourg called earlier this month for more ambition following a global climate deal in Paris in December. The European Commission, the EU's regulatory arm, stopped short of recommending an immediate move to stricter targets for 2030, saying instead that member states should now focus on enacting measures to reach existing goals. Poland, where forests cover almost 30 percent of its territory, wants the EU to take into account the sector in its 2030 climate laws. Under the Paris deal, almost 200 nations agreed to reduce pollution as soon as possible to reach a balance between anthropogenic emissions and removals by "sinks" like forests that absorb greenhouse gases. (www.bloomberg.com)

Japan Ministry fund to invest in 14 MW JWD wind project

March 14, 2016. A fund set up by Japan's Ministry of the Environment will invest 590 million yen (\$5.2 million) in a 14 MW wind power project in central Japan being planned by Japan Wind Development Co (JWD). The plant in Kakegawa city, Shizuoka prefecture, will be completed by early 2018, Green Finance Organisation, which manages the fund, said. Japan Wind Development will invest 610 million yen and the project will seek loans from financial organizations. Power from the

station will be sold to Chubu Electric Power Co. The environment ministry set up the fund in 2013 to invest in renewable energy projects to support regional companies and reduce carbon dioxide emissions. (www.bloomberg.com)

Obama finds common cause on climate change with Canada's Trudeau

March 10, 2016. President Barack Obama welcomed Canadian Prime Minister Justin Trudeau to the White House for a state visit as the two leaders sought to join forces to combat climate change. Trudeau and Obama have both described the warming planet as among the world's most pressing challenges. The U.S. and Canada issued a joint statement agreeing to reduce methane emissions from oil and gas by as much as 45 percent from 2012 levels by 2025. As part of that effort, the U.S. is beginning regulatory efforts to limit emissions at existing oil and gas infrastructure for the first time. (www.bloomberg.com)

France to weigh EU carbon price corridor in global pricing push

March 10, 2016. France seeks to stimulate a push for global carbon pricing and may weigh a price corridor to strengthen the European Union's emissions trading system should countries worldwide agree to act. In the first step, France wants to stimulate a global discussion about putting a price on pollution. France, which holds the presidency over United Nations climate talks until November, then wants the EU to consider all available tools to promote emissions pricing abroad and strengthen it in Europe. One method of propping up the European Union (EU) emissions market, the world's biggest, could be through the introduction of a carbon price corridor. (www.bloomberg.com)

Wermuth bets on greens as Merkel cools to solar, wind subsidies

March 9, 2016. Jochen Wermuth, who helps run private equity funds seeking climate-friendly projects, is betting on Germany's Green Party to fight plans by Angela Merkel's government to cut renewable-energy subsidies in Europe's biggest economy. Wermuth gave a € 300,000 gift (\$330,450) to the Greens, the environmental party's largest donation ever. The former Deutsche Bank AG director, who founded Wermuth Asset Management GmbH, is currently seeking as much as € 250 million for his Green Gateway Fund. Merkel's government has been squabbling over how to put more electric cars on German roads. She's targeted 1 million by 2020 but just 30,000 are presently registered. Her coalition has also been seeking to slow down the expansion of solar and wind power via auctions, a policy that the Greens oppose. Germany's biggest parties risk short-circuiting the shift to renewables, according to Wermuth, who forecast that software-driven clean energy technologies will upend traditional industries quicker than anticipated. His company is in the process of starting another fund marketed as a vehicle for "stopping climate change profitably," he said. Wermuth said his concern over the direction of federal policy explains why he's supporting Kretschmann, who he described as a savvy administrator with impeccable environmental instincts in one of Germany's richest states. (www.bloomberg.com)

Hergo Sun Japan completes solar power plant in Japan

March 9, 2016. Hergo Sun Japan KK has completed and connected to the grid the first photovoltaic plant, located in Chichibu City, Saitama Prefecture. The solar plant is owned by Hergo Sun Japan KK, a subsidiary of Infrastrutture Group, and will supply electricity to approximately 1,000 families. (solar.energy-business-review.com)

Alberta to form oil-sands advisory to help implement CO₂ policy

March 9, 2016. Alberta will rely on an oil-sands industry advisory group to help the government implement its carbon emissions reductions policy and ensure that industry is consulted, Premier Rachel Notley said. The group, whose members will be announced in the coming weeks, will consider how to implement the 100 megaton carbon emissions limit for the industry, as well as advising on land-use and resource planning, the Alberta government said. The government is still developing its climate and carbon policy, Notley said. More details of the climate and emissions plan will be announced in the budget in early April, Notley said. (www.bloomberg.com)

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