

# TECA – NEWS CLIPPING

(Energy Conservation : It Doesn't Cost. It saves)

02.02.2016

நெல்லை மாவட்டம், கூடங்குளம் அணுமின் நிலையத்தில், ஏழு மாத பராமரிப்பு பணி முடிந்து, நேற்று, மீண்டும் மின் உற்பத்தி துவங்கி உள்ளது.

தினமலர் ; ஜனவரி 31,2016

நெல்லை மாவட்டம், கூடங்குளத்தில், மத்திய அரசின் அணுமின் நிலையம் உள்ளது. இங்கு, தலா, 1,000 மெகாவாட் திறனுடைய, இரண்டு அணு உலைகள் அமைக்கப்பட்டு உள்ளன. முதல் அணு உலையில், 2013 அக்., 22ம் தேதி, மின் உற்பத்தி துவங்கியது. 2014 ஜூன் 7ம் தேதி, 1,000 மெகாவாட் என்ற முழு அளவிற்கு, மின் உற்பத்தி செய்யப்பட்டது; அதே ஆண்டு இறுதியில், வணிக மின் உற்பத்தி துவங்கியது. இதில் தமிழகத்திற்கு, 563 மெகாவாட் மின்சாரம் வழங்கப்படுகிறது. இந்த முதல் அணு உலையில், 2015 ஜூன், 24ம் தேதி காலை, 11:30 மணிக்கு, ஆண்டு பராமரிப்பு பணிக்காக, மின் உற்பத்தி நிறுத்தப்பட்டது. 'இந்த பணி முடிந்து, ஜூலை 24ம் தேதி, மீண்டும் மின் உற்பத்தி துவங்கும்' என, கூடங்குளம் மின் நிலைய அதிகாரிகள் தெரிவித்தனர். ஆனால், திட்டமிட்டபடி, மின் உற்பத்தி துவங்கவில்லை. இதையடுத்து, முதல் அணு உலையில், விரைவாக மின் உற்பத்தியை துவக்க கோரி, முதல்வர் ஜெயலலிதா, பிரதமர் நரேந்திர மோடிக்கு, 2015 இறுதியில், கடிதம் எழுதினார்; இருப்பினும், மின் உற்பத்தி துவங்கவில்லை. மார்ச் முதல், கோடைக்காலம் துவங்குவதால், தமிழகத்தின் தினசரி மின் தேவை, 15 ஆயிரம் மெகாவாட்டை தாண்டும் என, எதிர்பார்க்கப்படுகிறது.

இந்நிலையில், கூடங்குளம் முதல் அணு உலையில், மின் உற்பத்தி துவக்குவதற்கான ஆயத்த பணிகள், கடந்த வாரம் துவங்கின. ஜன., 20ம் தேதி இரவு, 11:49 மணிக்கு, 'கிரிட்டிக்காலிட்டி' என்ற அணுப்பிளவு ஆயத்த பணி துவங்கியது. ஏழு மாத பராமரிப்பு பணி முடிந்து, நேற்று காலை, 7:12 மணிக்கு, முதல் அணு உலையில் மின் உற்பத்தி துவங்கியது.

**'படிப்படியாக அதிகரிக்கப்படும்':**

அணுமின் நிலைய வளாக இயக்குனர் ஆர்.எஸ்.சுந்தர் கூறியதாவது: நீண்ட எதிர்பார்ப்புக்குப் பின், கூடங்குளம் மின் நிலையத்தில், மீண்டும் மின் உற்பத்தி துவங்கியது. காலை 8:00 மணிக்கு, முதல் அணு உலையில், 60 மெகாவாட் மின் உற்பத்தி செய்யப்பட்டது. படிப்படியாக, 300 மெகாவாட்டாக அதிகரிக்கப்பட்டது.

ஏற்கனவே திட்டமிட்டபடி, எட்டு மணி நேர இயக்கத்திற்கு பின், படிப்படியாக மின் உற்பத்தியை குறைத்து, 'டர்பைன் ஜெனரேட்டர்' வேகம் குறைக்கப்பட்டது. மாலை 4:00 மணி நிலவரப்படி, மின்



உற்பத்தி, 115 மெகாவாட்டாக வந்த போது, 'டர்பைன் ஜெனரேட்டர்' நிறுத்தப்பட்டது. அனுசக்தி ஒழுங்குமுறை வாரிய விதிமுறைகளின் படி, ஆய்வுகள் நடந்து வருகின்றன. நாளை, மீண்டும் மின் உற்பத்தி துவங்கும். படிப்படியாக, 1,000 மெகாவாட் மின் உற்பத்தி செய்யப்படும். இரண்டாவது அணு உலையில், விரைவில் எரிபொருள் நிரப்பி, மின் உற்பத்தி துவக்கப்படும். இவ்வாறு அவர் கூறினார்.

இதுகுறித்து, தமிழ்நாடு மின் வாரிய அதிகாரி ஒருவர் கூறுகையில், 'கூடங்குளம் மின் நிலையத்தில், மின் உற்பத்தி துவங்கியதால், கோடையில் ஏற்படும் மின் தேவையை சமாளிக்க முடியும்' என்றார்.

#### 687 கோடி யூனிட் உற்பத்தி :

கூடங்குளம் மின் நிலையத்தில், மின் உற்பத்தி நடந்த வரை, 9,267 மணி நேரம், 'டர்பைன் ஜெனரேட்டர்' இயக்கப்பட்டு, 687.50 கோடி யூனிட் உற்பத்தி செய்யப்பட்டது. இதன்மூலம், 1,565 கோடி ரூபாய் வருவாய் கிடைத்துள்ளதாக, கணக்கிடப்பட்டு உள்ளது.

### Tamil Nadu to set up 800MW supercritical coal-based power plant

Times of India: January 31, 2016

Tamil Nadu government has set the ball rolling for establishing the state's first 800MW supercritical coal-based power plant, with chief minister Jayalalithaa laying the foundation stone for the Rs 6,000 crore project.

Public sector unit BHEL has been awarded contract for the Rs 6,376 crore project which will come up at Ahipattu in Tiruvallur district over 250 acres of land, the government said on Sunday.

### Proposal revived for uniform power rate in Mumbai

Business Standard: February 2, 2016

Government asks distribution companies to come up with plan of action

The BJP (Bharatiya Janata Party)-led government has revived the proposal for uniform power tariff in Mumbai for consumers in the 0-500 units a month bracket. The Congress-NCP (Nationalist Congress Party) government during 2010-11 had initiated it but had to face regulatory hurdle.

Maharashtra energy minister Chandrashekhar Bawankule last week held a preliminary meeting with power distribution companies and asked them to come up with a proposal. There would be a meeting with chief minister Devendra Fadnavis as well to work out a plan of implementation as the government will have to sort out major issues with regard to budgetary allocation towards subsidy to distribution companies.

Currently, Tata Power and Reliance Infrastructure are the two private distributors while the BrihanMumbai Municipal Corporation arm BrihanMumbai Electric Supply and Transport (BEST) supplies in south Mumbai. State-run MahaVitaran distributes in eastern suburbs. The tariff ranges between Rs 2.05 per unit and Rs 9.95 per unit.

Supporting the plan, a Tata Power spokesperson said, "We believe that the consumer should have the option to choose her supplier based on the service rather than mere tariffs."

However, Reliance Infrastructure preferred not to comment.



Kameswara Rao, PwC Partner (energy, utilities and mining) said, "the financial requirement for uniform tariff should not be met by burdening industrial and commercial consumers as that could lead to an exodus, with consequent loss of taxes and employment from the city. The government should take a stand to follow the national Tariff Policy, which caps the cross-subsidy burden on industrial consumers, and propose use of targeted direct subsidy transfer for lifeline consumers." Given the higher cost of living, a higher threshold for lifeline consumption could be set, he added.

However, Debasish Mishra, Deloitte Touche Tohmatsu India Partner (consulting), said when there were efforts towards separating carrier and content in electricity distribution and bringing in efficiency through competition, uniform retail tariff made little sense.

A government official recalled that a similar proposal was discussed during the Congress-NCP government but did not find favour with the Maharashtra Electricity Regulatory Commission (MERC).

The Congress-NCP government had expressed its inability to provide about Rs 2,000 crore as subsidy to private generators and distributors, especially Tata Power and Reliance Infrastructure.

MERC in its June 2008 order ruled that it was not feasible to have uniform tariffs across different licensees due to inherent differences, such as revenue requirement, consumer mix, consumption mix, and low tension: high tension ratio. Further, MERC in a letter to the state government on July 11, 2011, said, "The commission is of the view that the government support in the form of subsidy under Section 65 of the Electricity Act, 2003, is the only method to implement uniform tariff in Mumbai."

### **Govt to states: Increase power tariff, cut theft**

Live Mint: February 1, 2016

Suggestions aimed to prevent utilities being bailed out by state govts from slipping back into losses.

The Narendra Modi government has urged state electricity regulators to increase power tariffs and ensure that power distribution companies cut power theft and operational costs to prevent utilities being bailed out by state governments from slipping back into losses.

Power utilities in states such as Rajasthan, Haryana, Jharkhand, Punjab, Tamil Nadu, Madhya Pradesh and Uttar Pradesh, where power is now provided below the cost of generation and delivery, will be asked to pass on about 30% of the per-unit losses to consumers through tariff increases. There would also be massive campaigns in these states to arrest power theft in order to reduce the remaining substantial gap between power cost and the price charged from consumers, central and state government officials said.

Tariff revisions and steps to boost efficiency in power distribution are covered by the tripartite agreements being signed by states, their power utilities and the Union power ministry under the Ujwal Discom Assurance Yojana (Uday), a rescue package for indebted power utilities.

The power ministry has in a presentation to the forum of state electricity regulators recently highlighted that the outstanding loan liabilities of state-run power utilities of Rs.4 trillion are ultimately being borne by tax payers with interest, an outcome of the inefficiency of distribution companies and delays in tariff revision.

"We have sensitized the state regulators about the need for timely tariff revision. Delays in this lead to stress in other sectors of the economy too, especially banking," said a government official privy to the development.



The central government has told regulators that state governments are taking a massive risk by taking over debt of power utilities, which in many cases, more than doubles the “theoretical fiscal deficit” of states and could eat into their funds meant for development.

Sanjay Agarwal, principal secretary (energy) of the Uttar Pradesh government, said that about 30-40% of the Rs.1.76 difference in the cost of power and the price charged to consumer for every unit of power in the state have to be brought down by tariff revisions. The remaining gap would be reduced to zero through other efficiency improvement measures by 2019-20, he said. Uttar Pradesh took over 75% of the outstanding loan liabilities of five loss-making state-owned power utilities amounting to Rs.39,900 crore on Saturday. In Rajasthan, power distribution companies like the Jaipur Vidyut Vitran Nigam Ltd and its counterparts in Jodhpur and Ajmer have to bring down to zero the existing difference of Rs.3.6 per unit between their cost of power and the price charged from consumer. The success of the state’s takeover of Rs.60,500 crore of debt incurred by three state utilities, announced last Wednesday, depends on achieving this milestone.

“There is difference of Rs.3.6 per unit between our power delivery cost and price realization. Out of this, Rs.1.7 accounts for interest payments. With the debt restructuring, we will be spared of this cost. However, we have to remove the remaining difference by tariff revisions and improvements in efficiency,” said an official from one of the distribution companies. According to central government estimates, Rajasthan’s “theoretical” fiscal deficit as a percentage of state GDP will go up to 9% from 3% now on account of taking over the debt and converting it eventually into equity or grant.

Under the Uday scheme, the central government will only count states’ extra interest payment liability on the taken over debt in calculating their fiscal deficit, not the principal amount of debt taken over. States are mandated to maintain a 3% fiscal deficit, which indicates their borrowing limits. However, bond dealers often take into account offline items too, rather than going by the fiscal deficit figures projected by states. Also, after a five year moratorium on loan repayment, states will have to find the resources for squaring off this liability. Rajasthan’s interest outgo as a percentage of its total revenue receipts is expected to go up from about 10.5% to 14% after the debt takeover.

Power distribution, mostly done by state-owned utilities or electricity boards, has so far been a loss making business as states are reluctant to pass on the entire cost of power to the consumers, resulting in huge liabilities for utilities, besides power cuts. Chhattisgarh and Jharkhand are the other states that have so far announced debt takeover of utilities under the Uday scheme.

Experts said that state power utilities ought to use the debt takeover scheme provisions and the recently revised power tariff policy to improve performance.

“Regulators must analyse their licensees’ tariff filings more diligently to ensure distribution companies are taking steps to capture these efficiency gains. Also, governments must introduce private participation in at least 25% of the distribution circles. This will create benchmark competition and push the state owned areas improve service delivery and performance,” said Kameswara Rao, leader of energy utilities and mining at PricewaterhouseCoopers (PwC) in India.

## **Uday to be modified to include states without discoms**

**Business Standard: January 28, 2016**

Power Ministry's bailout initiative targets states with stressed discoms

Uday, a scheme rolled out by the power ministry to bail out financially stressed discoms, will be modified soon to accommodate 12 states that don't have their own distribution company.



"These 12 states are not eligible to fall under the Udayscheme as they don't have their discoms. I am looking at modifying it to accommodate them as well," said Union power, coal and renewable energy minister Piyush Goyal here on Thursday during an event.

He said the scheme was not only a bailout programme but a show of 'collaborative federalism' as advocated by the government.

While the minister did not cite a deadline for the scheme to be modified, he said, "Uday ensures the discoms don't run into losses in the future as well."

According to him, since the onus of running the discoms efficiently falls on states, they will ensure its financial health.

Since the scheme was rolled out in November last year, 15 states have joined covering 90 per cent of the entire discom's debt of Rs 4.3 lakh crore while three states —Jharkhand, Chhattisgarh and Rajasthan — have signed a memorandum of understanding with the Centre.

He said West Bengal had given an 'in-principle verbal assurance' to join the scheme. According to Goyal, the country can save Rs 1.8 lakh crore each year if the states consent to join Uday.

The power ministry is stressing on securing fuel-supply agreements and contracts for power generation, tackling the impending problem of loss-making discoms, and increasing power transmission lines in the country

#### **Power sector outlook 'stable to negative' in FY17: Ind-Ra Hindustan Times: February 1, 2016**

India Ratings and Research (Ind-Ra) has maintained a 'stable to negative' outlook on the power sector for the next fiscal as the plant load factor (PLF) of plants is expected to remain low amid muted growth in electricity demand, India Ratings said.

The rating agency expects power demand to grow modestly at 4-5% and power generation at 5-6% in FY 2016-17, with deficits remaining low at 3-4%.

"The muted demand growth would be driven by the expectation of muted growth by industrial consumers, who constitute 40% of the energy sales. Moreover, the current focus on use of efficient devices (LEDs and agricultural pumps) is leading to lower demand," it said.

The PLFs of the thermal power plants are likely to remain low as demand growth remains muted. Moreover, as the renewable energy share increases, it could exert additional pressure on the PLFs of coal-based plants. "Until the financial position of the discoms improve, they will continue to prefer load shedding rather than supply power to the consumers, due to the average loss incurred of Rs 1.14 per unit on each unit supplied," Ind-Ra said. It further said state electricity distribution companies (discoms) are still to see a financial turnaround, despite the announcement of Ujwal Discom Assurance Yojana (UDAY) scheme, which is a welcome move to bring about operational efficiencies and a financial turnaround.

The agency also expects the coal output to increase by 10% in the next fiscal to reach 594 metric tonnes, given the government's focus on achieving the targeted one billion metric tonnes by 2020 and on the back of the strong performance this financial year.

"Higher output will come from ramping up output from existing and new mines and better efficiency. Given the increase in domestic coal output, coal imports into India could decline by 10-15%, which is likely to exert pressure on volumes of large coal importers," it said.

Ind-Ra expects solar tariffs to decline to Rs 4% by next fiscal (the lowest bid in FY 2015-16 stood at Rs 4.34 per unit), which, it said, will accelerate its adoption.

“Lower tariffs will be driven by financial, technical and counterparty improvements. Financially, the cost of capital is expected to decline due to lower cost of debt, increase in loan tenors, lower equity internal rate of return expectations, and higher project leverage,” it said.

The headroom for discoms to increase tariffs further remains limited, given the substantial tariff hikes taken between FY2012-FY15 and the emergence of solar power as an alternative source of cheap and decentralised generation.

“Against the backdrop of limited possibility of tariff hikes, discoms will be forced to improve their operational efficiency by lowering of aggregate technical & commercial (AT&C) losses, power purchase cost rationalisation and lowering of interest costs. The reduction in AT&C losses to 15% from 22.7% in FY14 can yield additional revenues of Rs 25,600 crore, which is nearly 41% of the book losses in FY14,” Ind-Ra said.

The agency, however, noted that the outlook could be revised to ‘stable’ on directional movement towards improvement in the financial health of discoms, better visibility on demand growth for electricity leading to improvements in PLFs.

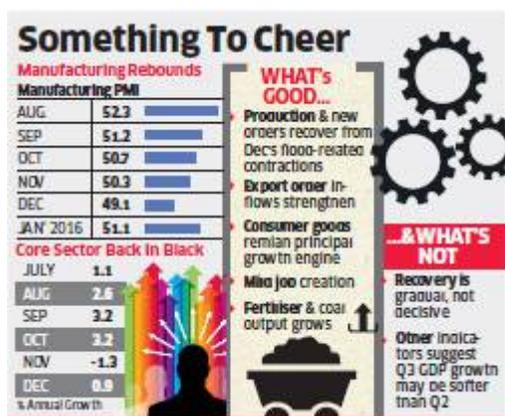
## Signs of recovery: Manufacturing at 4-month high, core sector grows a tad

The Economic Times: February 2, 2016

Two sets of data released on Monday pointed towards a mild expansion in industrial output after a dismal set of numbers last month that had shown a marked post festival season slump.

India's manufacturing sector activity improved to a four-month high in January with the seasonally-adjusted Nikkei India Manufacturing Purchasing Managers' Index (PMI) climbing into expansion territory after the contraction seen at the end of last year

The index posted a reading of 51.1 in January, compared with 49.1 in December, data released on Monday showed. A reading above 50 denotes expansion.



Separately released government data showed the core sector grew a marginal 0.9% in December, reversing the 1.3% contraction in November output. This indicates industrial production growth, as measured by the Index of Industrial Production (IIP), may also bounce back in positive territory after hitting a four-year low of -3.2% in November. The core sector index has a 38% weight in IIP.



The data come a day before the RBI's monetary policy review, in which experts do not expect a change in the key policy rates. India's manufacturing sector performance was in sharp contrast to a deterioration in activity in the region.

Data released on Monday revealed that while there was a general deterioration in manufacturing in Malaysia, the downturn continued in Indonesia and China showed 'modest deterioration'.

The Nikkei manufacturing PMI for South Korea indicated worsening operating conditions. Developed countries looked a mixed bag with PMI in France at a five month low while the UK showed an uptick in manufacturing sector activity. "January's PMI data paints a brighter picture of the Indian economy," the PMI release noted. The data showed that levels of production and total new business registered mild increases following contractions in the prior survey month.

The consumer goods sub-sector remained the principal growth engine at the start of the year, seeing substantial expansions of both output and new orders.

In contrast, producers of investment goods saw a fall in output and new orders, while production volumes stagnated in the intermediate goods category.

The levels of incoming new export business rose for the 28th month running. Although there was some job creation in January, the survey noted that this increase was insufficient to reduce the pressure on manufacturers' capacity.

"Although the RBI is likely to continue its monetary policy loosening cycle in 2016, February's meeting will probably see the repo rate remain unchanged at 6.75% as the central bank will remain wary of inflationary pressures building in the country," said Pollyanna De Lima, economist at Markit, the agency that compiles the index.

## **CORE RECOVERY**

The mild recovery in the core sector output was largely on the strength of a sharper 6.1% growth in coal output in December and continued robustness in fertiliser production (13.1%). Cement output was up 3.2% while electricity generation rose 2.7%.

"After negative growth in November 2015, mild growth provides some relief to industrial output in December," said Devendra Kumar Pant, chief economist, India Ratings & Research. "On the whole, core sector numbers point towards a mild expansion in industrial output in December 2015."

Crude oil (-4.1) and natural gas (-6.1%) production contracted in December. Refinery output was up marginally at 2.1% in December.

## **Power sector to get benefit from several governments initiatives - Accord Fintech**

Live Mint- February 1, 2016

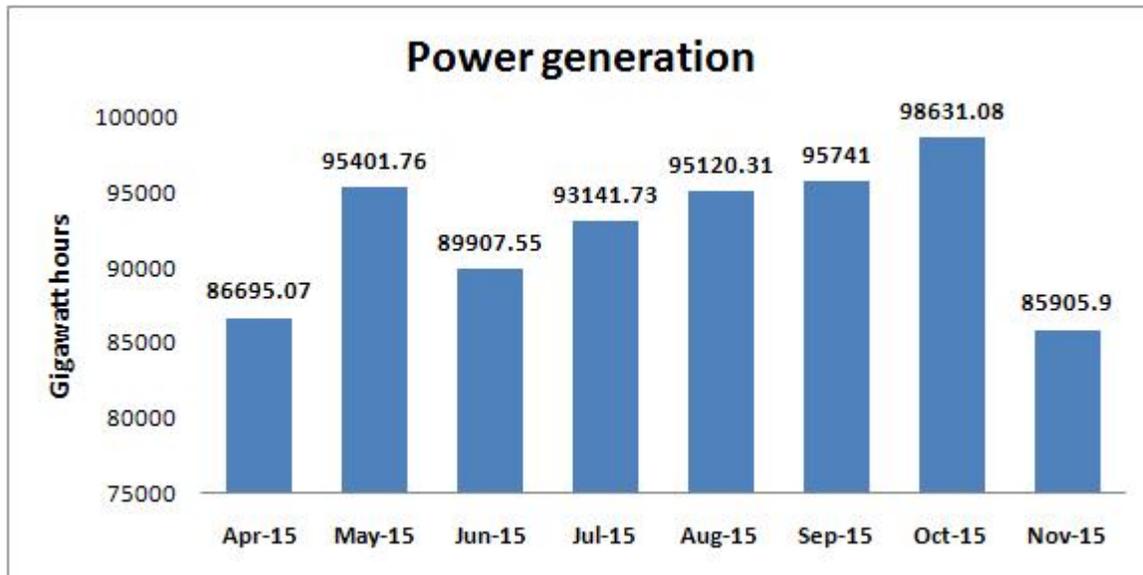
Power or electricity is essential for infrastructure development affecting economic growth and welfare of the country. Currently, the power sector in India is at a crucial juncture, with several large investments being undertaken by public and private players, and developments promising a significant transformation of the sector. The Indian power sector is one of the most diversified sector in the world with sources of power generation ranging from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power to other viable non-conventional sources such as wind, solar, and agriculture and domestic waste. The developers of Power Plants have been facing various constraints like coal/gas

allocation, environment clearance, land acquisition, financing and funds tie-ups, etc. for last about 4 years, which has resulted in only very few new projects coming up.

### Power Generation

Power generation during April-November 2015 stood at 739.915 BU, showing a growth rate of 4.55% over the corresponding period previous year. Coal based power generation during the current year was 561.423 BU, showing growth rate of 6.4% over the previous year same period.

During 2014-15 against the generation target of 1023 BU, the achievement was 1048.4 BU registering Y-O-Y growth of 8.4%. The annual generation crossed 1 Trillion Units and registered highest growth in last two decades.

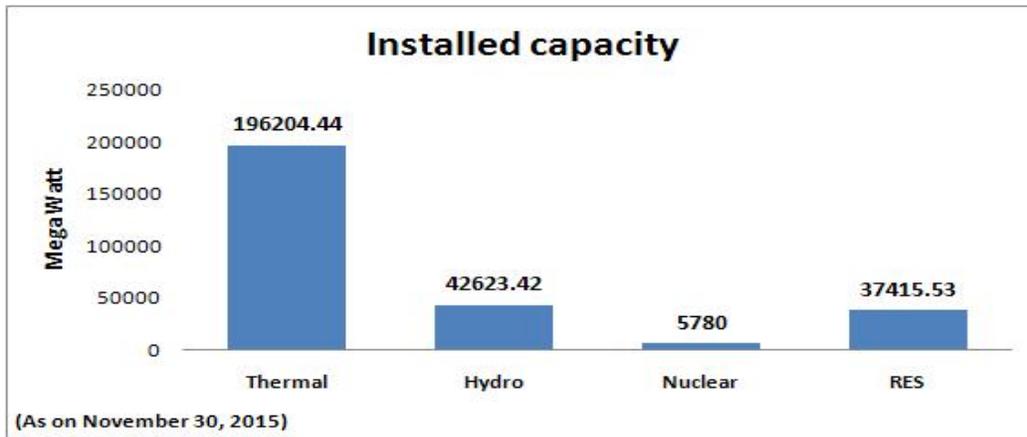


### Generation capacity addition

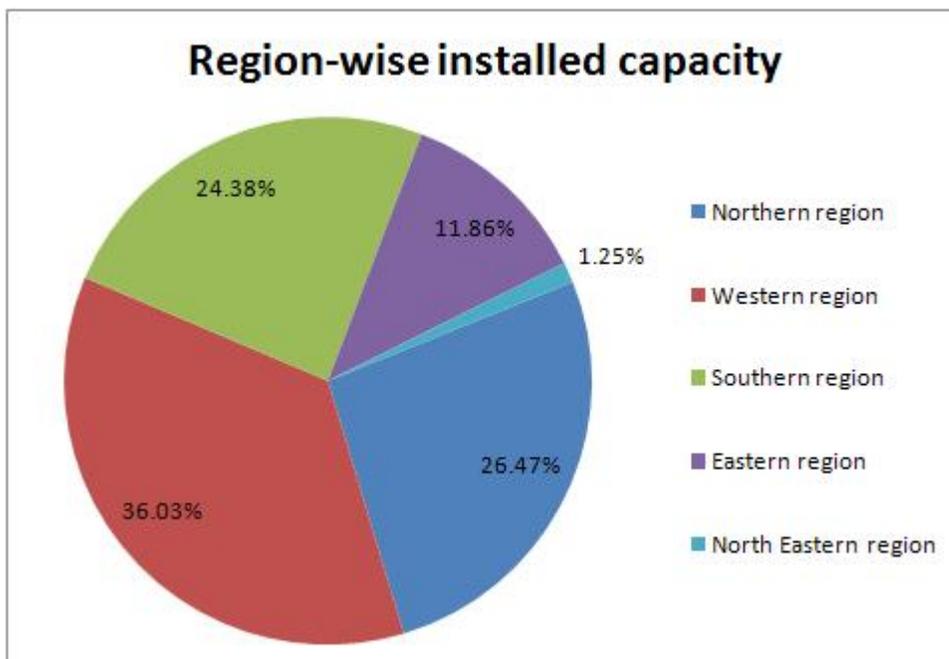
The generation capacity addition during 2015-16 (April-November, 2015) was 9,466 MW against the annual target of 20,037. The capacity addition during the first 3 years and 8 months (1-April-2012 to 08-December-2015) of the 12th Plan was 70,480 MW which has not only exceeded the capacity addition of 54,964 MW of the entire 11th Plan (2007-2012) but also constituted 79.6% of the total 12th Plan target of 88,537 MW.

Out of 9,466 MW added during the period April-November, 2015, contribution of the thermal sector was significant i.e 7,616 MW (80.5% of the total). It includes NTPC's Bongaigaon (300 MW) and Vindhyachal Stage-V (500 MW) in Thermal and remaining 2 units of Koldam (200 MW each) in Hydro and NLC's Tuticorin (500 MW).

During 2014-15 against the target of 17830.30 MW generation capacity of 22,566.30 MW was achieved. This was highest ever capacity addition in a single year, registering a growth of 26% over the capacity addition in 2013-14. Efforts have been made to increase the domestic coal production to meet the requirement of power plants. The growth in domestic coal supplied to power plants during 2014-15 was 10.4%. Government of India has sanctioned a scheme for utilization of gas based power generation capacity for the years 2015-16 and 2016-17. The scheme envisages supply of imported spot Re-gasified liquefied natural gas (RLNG) to the stranded gas based plants as well as plants receiving domestic gas, selected through a reverse e-bidding process.

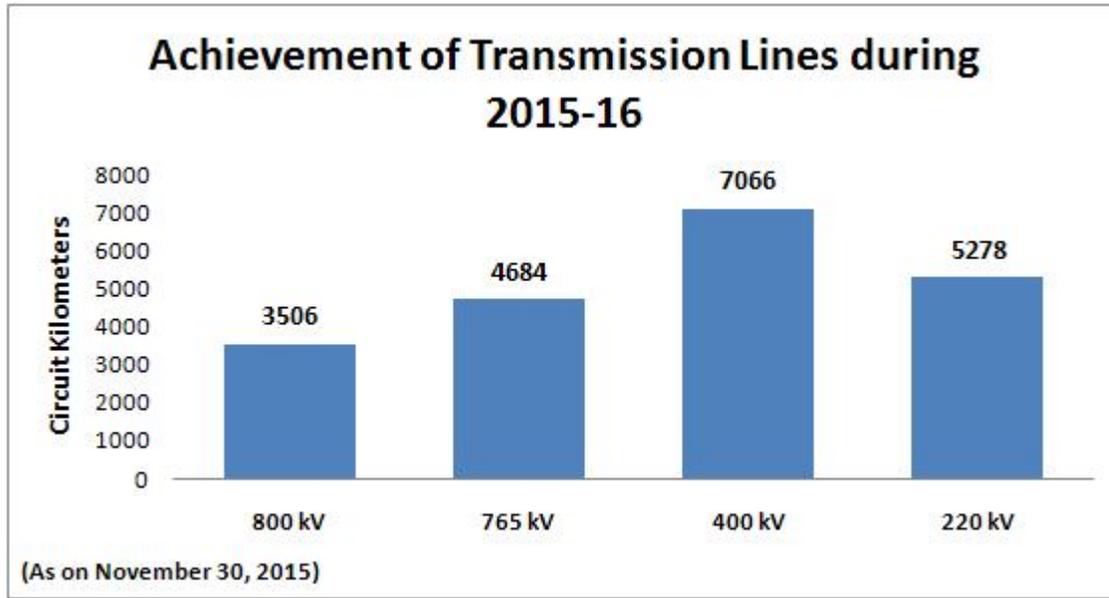


India's around 36 per cent of power capacity is in western region followed by 27 per cent in northern region, 24 per cent in southern region, 12 per cent in eastern region, and only 1 per cent in north-eastern and island regions. Western region leads in thermal power and northern region in hydro with 78594.42 MW and 18246.77 MW respectively. Southern region leads in Renewable Energy Sources (RES), with 41 per cent share in all-India aggregate, followed by western region (36 per cent) and northern region (21 per cent).



#### Transmission

Consequent to various steps taken by the Government of expediting forest clearances and intensive monitoring of critical transmission lines, 20,534 circuit kilometers (ckm) of transmission lines have been commissioned during the period April-November, 2015 against 14,685 ckm commissioned during the same period last year, thus having a growth of 39.8%. This is 86.6% of the annual target of 23,712 ckm fixed for 2015-16. Similarly, the overall increase in the transformation capacity has been 33,181 MVA during April-November, 2015 constitutes 65.7% of the target of 50,542 fixed for 2014-15.



#### Government initiatives

##### Cabinet gives nod to approval to a new scheme UDAY

The Union Cabinet has given its approval to a new scheme Ujwal Discom Assurance Yojana (UDAY) moved by the Ministry of Power. UDAY provides for the financial turnaround and revival of Power Distribution companies (DISCOMs), and importantly also ensures a sustainable permanent solution to the problem. It envisages to reduce interest burden, cost of power and AT&C losses. Consequently, DISCOM would become sustainable to supply adequate and reliable power enabling 24x7 power supply. The scheme provides that States would take over 75% debt of Discoms, as on 30th September, 2015 in two years.

##### Government has launched National Smart Grid Mission

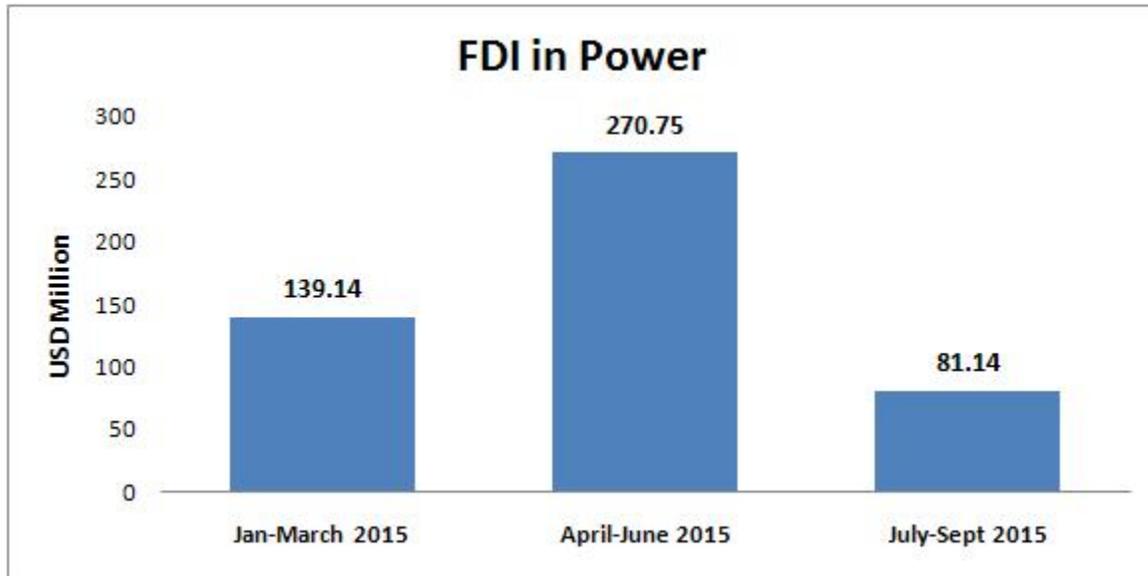
The Government of India has approved the National Smart Grid Mission (NSGM). The mission is an institutional mechanism for planning, monitoring and implementation of policies and programs related to Smart Grid activities. The total outlay for NSGM activities for 12th Plan is Rs 980 crore with a budgetary support of Rs 338 crore. The major activities envisaged under NSGM are development of smart grid, development of micro grids, consumer engagements and training & capacity building etc. NSGM entails implementation of a smart electrical grid based on state-of-the art technology in the fields of automation, communication and IT systems that can monitor and control power flows from points of generation to points of consumption. NSGM has three tier structure. At the apex level, NSGM has a Governing Council headed by the Minister of Power. Members of the Governing Council are Secretary level officers of concerned Ministries and departments. At the second level, the NSGM has an Empowered Committee headed by Secretary (Power). In a supportive role, NSGM has a Technical Committee headed by Chairperson (CEA).

##### Government launches Integrated Power Development Scheme

In a bid to facilitate State utilities to ensure quality and reliable 24X7 Power supply in urban areas, Government approved the IPDS with total outlay of Rs 32,612 crore including budgetary support of 25,354 cr. The main component of the scheme are strengthening of sub-transmission and distribution networks in urban areas, metering of distribution transformers/ feeders/ consumers in urban areas and IT enablement of distribution sector. During 2015-16 against the target of 360 towns.

## Investment in the sector

The investment climate is positive in the power sector. Due to policy of liberalisation, the sector has witnessed higher investment flows than envisaged. The industry has attracted FDI worth Rs 49,243.38 crore or \$9,967.22 million during the period April 2000 to September 2015. During Q2 FY16, the sector has attracted FDI worth Rs 886.38 crore or \$139.14 million.



## Recent developments

### India inks MoU with Korea for electric power development

India has signed Memorandum of Understanding (MoU) with the Republic of Korea on cooperation in the field of electric power development and new energy industries. It will provide an enabling framework for establishing contact between governmental entities and public authorities of both countries in the field of electric power development and new energy industries. It would also facilitate exchange of knowledge and experience aiming to create opportunities for investment in both countries. The focus of attention will be bilateral cooperation in the areas of electric power development, renewable energy, smart grids and power Information and Technology, transmission and distribution of electric power, energy efficiency and energy storage systems, etc. Measures in these areas will improve energy security and reliability of supply, improve energy access and facilitate sustainable economic growth. The Railway Ministry signed four MoUs with ministry of Power and its organisations for cooperation in areas of Electricity Transmission and Energy Conservation in a time bound manner.

### Nepal to import additional 90 MW of electricity from India

Nepal, reeling under acute energy shortage, is set to import an additional 90 MW of electricity from India by January-end after the completion of a key inter-country transmission line. The country is currently facing daily 12-hour load-shedding in its major cities in the wake of the blockade of the Indo-Nepal border by Madhesis, largely of Indian-origin. Many people in the urban areas are relying on electricity due to the shortage of cooking gas. The country is currently importing 235 MW of electricity from India. Nepal Electricity Authority (NEA) has made necessary preparations to acquire 90 MW of electricity. The installation of Dhalkebar-Mujjafarpur inter-country transmission line is about to complete in a month and a technical test required for the same is in progress to import



power to the country towards the end of this month. Nepal currently produces around 780 MW electricity though the domestic demand stands at 1,300 MW during peak period.

### **Corporate developments in power sector**

NTPC, India's largest power producer and consumer of coal, has embarked on a near Rs 1,000 crore research and development exercise that will involve groundbreaking work in areas of new and renewable energy, waste management, efficiency improvement and cost reduction.

State-run hydropower company SJVN is planning to invest Rs 40,000 crore to add 6,535 mw power generation capacity by 2021-22. The company will mobilise entire money for this investment through internal accruals and bank loans and there would not be any need to tap the market to raise resources for this expansion.

Alstom T&D India has bagged orders worth €20 million (around Rs. 140.3 crore) from Odisha Power Transmission Corporation. The contracts include the supply of a 400/220 kV air insulated substation (AIS) as well as gas insulated substation (GIS) in Odisha.

Neyveli Lignite Corporation will start two investment projects with a total investment of Rs 5,328 crore, which include setting up of Bithnok Lignite Mine (2.25 million tonne of Lignite) cum Thermal Power Project. The expansion is part of achieving a lignite mining capacity of 49.50 MTPA compared to a present capacity of 30.60 MTPA and a total generating capacity of about 12,221 Mw against the present capacity of 2,990 Mw, by the end of 13th Plan.

### **Outlook**

The power sector is at a crucial juncture of its evolution, with many private producers and domestic manufacturers also playing a significant role in various capacities. The sector has got ample of opportunities with government's plan to generate two trillion units (kilowatt hours) of energy by 2019 to provide 24x7 electricity for residential, industrial, commercial and agriculture use. To attain this goal, it is required to double the current production capacity.

On the concern side, the power sector is facing challenges including high fuel supply risk, cost overruns at plants operated by independent power producers (IPPs), and the limited capacity to pay on the part of financially weak distribution utilities. Some IPPs are also locked into power purchase agreements (PPAs) that have become unviable, because they do not allow the high costs of imported fuel to be passed through. Many IPPs will exhibit weak liquidity profiles because of their high exposure to off-taker risk and fuel shortages.

Nevertheless, the Indian Government is taking numerous steps and initiatives like 10-year tax exemption for solar energy projects, etc., in order to achieve India's ambitious renewable energy targets of adding 175 GigaWatts (GW) of renewable energy, including addition of 100 GW of solar power, by the year 2022. Government has also launched National Smart Grid Mission and Integrated Power Development Scheme. These steps and schemes will help power sector to perform well in coming time.

***Save Energy. Save Money. Save the Planet***