

India's Moribund power witnesses sea change after Modi launches major initiatives

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Infrastructure bottleneck is the single most problem that impedes India's rapid economic growth especially power generation and Prime Minister Narendra Modi government aware of this constraint has given topmost priority to the sector and taken a slew of initiatives starting with clearing the mess created by the previous UPA in coal auction. The coal scam alone has retarded power development in the country by several years. India's power generation stood at 266 MW and the demand is likely to more than double in the next 4-5 years commensurate with expected 8-9 per cent annual GDP growth. To meet power demand is going to be gigantic task as more power would be required not only for increased industrial and agricultural activity but also the domestic consumption with improving standard of living and growing middle class numbering over 300 million.

The Government, which is spending \$1 trillion in infrastructure development, is expected to spend at least \$300 billion in the power sector in the next five years. Funding is not an issue as in the past but skilled manpower could come in the way which is now being tackled adequately by the new government. The Public Private Partnership has however not worked well in the infrastructure sector and it may require some tweaking. It is for this reason the union Budget presented by Finance Minister Arun Jaitley announced setting up of five 'plug and play' ultra mega power plants to generate 20,000 Mw of thermal power with an investment of around Rs one lakh crore. The first of these five 4000 Mw power plants is to be set up in Odisha followed by another in Tamil Nadu.

The successful coal auction for re-allocation of some of the 204 coal blocks de-allocated by Supreme Court following Rs 1.86 lakh crore coal scam during UPA government, fetched a whopping Rs two lakh crore to the government kitty and helped kick-starting at least 20,000 Mw of completed thermal power projects stuck for want of coal linkage. This would give immediate relief to power shortage in some parts of the country but lack of grid connectivity may perhaps be an impediment in the short term to transfer this surplus power to deficit states in Southern and Eastern India.

Apart from the growing need of the industry, the Modi government has embarked upon a massive programme to provide 24 into 7 power across the country by 2019. This meant connecting to the grid 1,25,000 of the six lakh villages in the country. These 1.25 lakh villages have not yet been connected. Providing 24 into 7 power also meant lot of other innovative steps. Conscious of this fact, several landmark decisions have already been taken in thermal power generation, hydel and nuclear power and more importantly in solar, wind and other green energy besides strengthening of transmission and distribution, separation of feeder and metering of power to consumers.

Special focus has also been given to north east by giving approval to the north eastern power system improvement project and comprehensive scheme for strengthening of transmission and distribution in the north eastern states.

In the reform and restructuring front, various amendments are being brought in the Electricity Act and Tariff policy. Comprehensive state-specific action plans for 24x7 power to all homes is being prepared in partnership with respective states, encompassing generation, transmission and distribution. The power ministry has already signed a memorandum of understanding with the Andhra Pradesh government under its 'Power for all' initiative that aims to cover the entire state by October 2016. Plans for Delhi & Rajasthan are complete and are being readied for other states. Government was also implementing an ambitious Rs 43,033 crore plan to supply separate electricity through separate feeders for agricultural and rural domestic consumption to ensure round-the-clock power rural households. Also, Rs.32,612 crore integrated power development initiative has been launched for strengthening sub-transmission and distribution systems. Plan are afoot to reduce transmission losses by 5 per cent, which is significant and it stood at around 27 per cent. A five per cent saving in transmission losses meant that India has additional 15,000 Mw of power without any fresh investment. Creating new power generation capacity of one Mw of power meant and investment ranging from Rs 5-7 crore and 15,000 mw reduction losses meant an additional RS 75,000 to Rs 1.05 lakh crore is available other investments.

The Modi government has initiated National Smart Grid Mission to make the Indian Power infrastructure cost effective, responsive and reliable. Smart grids use sensors, meters, digital controls and analytic tools to automate, monitor and control the two-way flow of energy across operations—from power plant to plug. A power company can optimize grid performance, prevent outages, restore outages faster and allow consumers to manage energy usage right down to the individual networked appliance.

Smart grids can also incorporate new renewable energies such as solar and wind power, and interact locally with distributed power sources, or plug-in electric vehicles. This is a very ambitious programme and the 100 smart cities to be set up will also have smart grids resulting in sizeable savings in power.

All central ministries and departments have been asked to replace CFL and Incandescent bulbs with LED bulbs. Finance ministry has issued directives to all departments in this regard.

After the recent devastating Hudhud cyclone in Vizakhapattanam, Energy Efficiency Services Limited has replaced 91,000 street lights with LED lights. Chennai and Mumbai municipalities too have started replacing CFL and sodium vapour lamps with LED street lights in certain areas. A city like Chennai can save up to 20 Mw of power in street lights and Mumbai about 30 Mw. LED conversion is a Rs 75,000 crore industry and it can bring about saving of over 1000 Mw in entire country on street lights alone, which can be powered by solar photovoltaic power as well.

With Modi government stepping up renewable energy power generation target to one lakh Mw of solar power and 60,000 Mw of wind power by 2022, Rs 10 lakh crore investments are expected to pour in to the renewable energy sector in the next seven years. Apart from efforts to quickly restart stalled hydel projects, government has stepped up budget allocation for renewable energy by 65.8 per cent and is in the process of coming out with new renewable energy policy for solar and wind power.

As part of its blueprint for energy security, the National Democratic Alliance (NDA) government plans to float five funds of \$5 billion each, targeted at promoting green energy sources.

The new and renewable energy (MNRE) ministry plans to get the help of state-owned and private sector financial institutions such as Power Finance Corp. Ltd (PFC), Rural Electrification Corp. Ltd (REC), Indian Renewable Energy Development Agency (IREDA), IFCI Ltd, SBI Capital Markets Ltd and ICICI Bank Ltd to create a corpus of \$25 billion. The government's renewed focus on green energy comes in the backdrop of the US and China inking a climate change deal wherein the US will reduce its emissions by 26-28% below its 2005 level by 2025 and China will reach the peak of its harmful carbon dioxide emissions in around 2030.

The new measures announced by the government give top priority for domestic players and the Rs 100,000 crore worth of orders placed in power sector in the recent months by NTPC, Coal India, Energy Efficiency Services, Power Grid Corporation will boost local manufacturing giving boost to make in India campaign of Prime Minister Narendra Modi. Also domestic solar and wind large orders have been placed on local manufacturers to make them price competitive by increasing capacity and getting world class technology. Government organizations will buy 1000Mw worth solar projects with special provision so for use of only domestically produced cells and modules. Defence establishments will buy 300 Mw solar plants. Government has also planned to save 10 per cent energy through conservation. As much as 10,000 crore units are to be saved, which can light up 11 crore lives and save Rs 40,000 crore.

The government's strategy to focus on renewable also stems from the fact that India has an energy import bill of around \$150 billion, which is expected to reach \$300 billion by 2030. India imports 80 per cent of its crude oil and 18 per cent of its natural gas requirements. As of April 2014, total thermal installed capacity stood at 168.4 GW, while hydro and renewable energy installed capacity totaled 40.5 GW and 31.7 GW, respectively. Wind energy market of India is expected to attract about Rs 20,000 crore (US\$ 3.16 billion) of investments next year, as companies across sectors plan to add 3,000 MW of capacity powered by wind energy.

Around 293 global and domestic companies have committed to generate 266 GW of solar, wind, mini-hydel and bio-mass based power in India over the next 5-10 years. The initiative would entail an investment of about US\$ 310-350 billion. The industry has attracted FDI worth US\$ 9,548.82 million during the period April 2000 to February 2015.

India's natural gas production from hydrocarbon resources is expected to rise 52 per cent in the next three years, outstripping the growth in demand from power and fertilizer firms during the same period, according to the oil ministry. India's natural gas output is projected to

increase to almost 230 million metric standard cubic metres per day (mmscmd) by 2017-18 from the current 138.33 mmscmd as at the end of 2014-15, a growth of 52 per cent. This is against a growth in demand of 27 per cent from the core natural gas consuming sectors—power and fertilizer. This is a welcome development for the energy sector as in the past India had been a laggard in even meeting its natural gas production target with the production at 3.365 billion cubic metres (bcm), down 5% from 3.54 bcm produced in 2013-14 and down 8.1% from the target production of 3.66 bcm. In the last 10 years, while India's domestic production has grown by 10%, India's imports of R-LNG has grown by 335% due to a major growth in demand, which has risen by almost 46%, according to PPAC.

The result of these developments would, however, might not be immediate as there will be some lag before these projects go on stream. With investment climate improving, inflation moderating, growth picking up in the face of stable government, the outcome of these initiative will become visible on the ground in the coming months and years.

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