

Energy Access Monitor

March-April 2016

Trending topics

Rural Electrification



- PM urged for rural electrification and net-connected panchayats
- Odisha budget focuses on irrigation, agriculture, rural development & energy
- ABB partners with IIT-Madras to build microgrids for rural electrification
- Power surge crown for state
- Centre scales down power demand forecast

Cooking Energy Access



- LPG for every Indian household

Financing energy access



- Sustaining Earth Day: Renewables Investment Hits a New High
- India will need 'unparalleled' \$1 trillion in energy investments by 2030: Piyush Goyal

Energy Access and SDGs



- WPC and OFID launch new initiative



PM for rural electrification, net-connected panchayats. At the infrastructure review meeting, Niti Aayog CEO Amitabh Kant made presentations about the physical performance achieved against the target set for the infrastructure sector in front of PM Narendra Modi.

Prime minister was informed that:

- ✓ 6,000 villages have been electrified out of 18,500 un-electrified villages and the renewable energy capacity has reached 39.5 GW against the target of 175 GW.
 - ✓ 1,371 towers have been installed to provide mobile connectivity to villages affected by Left-wing extremism and work has been expedited in North-East and other hilly areas.
 - ✓ Twelve tourist spots have been provided with public wi-fi connectivity as part of the initiative to cover all important tourist destinations.
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 - 1,371 towers have been installed to provide mobile connectivity to villages affected by Left-wing extremism.
 - Twelve tourist spots have been provided with public wi-fi connectivity as part of the initiative to cover all important tourist destinations.
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In response to these accomplishments, PM stressed upon speeding up the pace of development works ranging from rural electrification to bringing broadband internet connectivity to gram panchayats and he asked for closer monitoring to expedite the projects to meet the shortages of five crore dwelling units in rural areas. On Awas Yojana for urban housing he asked for promoting mandatory reforms by linking it to financial assistance.

Odisha budget focuses on irrigation, agriculture, rural development & energy. Creating adequate fiscal space for borrowing, the Odisha government has recently presented Rs. 94,052.65 crore budget for 2016-17 with emphasis on irrigation, agriculture, rural development and energy. The budget was presented by finance minister of state Mr. Pradip Kumar Amat.

Key points of the budget

- A total of Rs 94,052.65-crore budget for 2016-17 was presented with emphasis on irrigation, agriculture, rural development and energy.
- There has been an increase by about 11.32 per cent in the size of allocation made for 2016-17 in comparison to the previous budget.
- The budget has pegged fiscal deficit at Rs 14,532.39 crore, or 3.79 per cent, of its gross state domestic product (GSDP), which was higher than the mandated threshold of 3.5 per cent.

<ul style="list-style-type: none"> ➤ Finance minister has proposed a sum of Rs 333.33 crore under Smart City Mission for development of Bhubaneswar as a smart city. A provision of Rs 140.15 crore has also been made under Atal Mission for Rejuvenation and Urban Transformation (AMRUT) to provide improved basic service in nine select urban local bodies of the state.
<ul style="list-style-type: none"> ➤ There are no new tax proposals and the total budget amount included an annual Plan outlay of Rs 50,000 crore.
<ul style="list-style-type: none"> ➤ The total revenue expenditure is estimated at Rs 7,443.38 crore during 2016-17. Thus, after achieving revenue balance, a surplus of Rs 3,683.34 crore has been projected in the budget estimates for 2016-17, which is 0.96 per cent of the GSDP
<ul style="list-style-type: none"> ➤ While proposing an outlay of Rs 13,396.35 crore for school and mass education department and higher education department, the finance minister announced a new scheme 'Odisha Adarsha Vidyalaya' by Odisha government even after the central government discontinued assistance for establishment of model schools.
<ul style="list-style-type: none"> ➤ Besides a general budget, a separate budget was also presented in front of two assemblies on agriculture with budget amount of Rs 13,181.89 crore. Showing a 20.89 per cent increase as against the previous fiscal. The outlay of the agriculture budget comprising the departments of water resources, agriculture, cooperation, fisheries and animal resources, is about 14.02 per cent of the total outlay proposed in the Budget for 2016-17.
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<ul style="list-style-type: none"> ➤ While the highest amount in the agriculture budget of Rs 7,241.66 crore has been allocated to the water resources department with thrust on irrigation, the agriculture and farmer empowerment department got Rs 3,438.91 crore.

ABB partners with IIT-Madras to build microgrids for rural electrification. Power and automation company ABB has partnered with IIT-Madras (IIT-M) to build micro grids as well as for joint research and development in the field of rural electrification, utilization of natural non-fossil resources, battery energy storage and their connection to loads and main grid.

With thousands of Indian villages still un-electrified, the decentralized microgrids are a viable solution to power these villages. It has the potential to eliminate dependence on expensive diesel fuel and the grid.

- ✓ Microgrids technology is an important part of their next

- A microgrid is an energy system consisting of distributed energy sources that can operate independently or in conjunction with the area's main electrical grid.
- The agreement between ABB and IIT-Madras also includes internship opportunities to post-graduate students of IIT-M for the next three years.

level strategy and well poised to make the Indian government's vision of power to all a reality by providing access to energy and ensuing economic empowerment to the people, said the CEO of ABB.

- ✓ This agreement also includes internship opportunities to post-graduate students of IIT-M for the next three years.

Power surge crown for state. Bihar has topped the country in rural electrification by taking power to un-electrified villages at a speed unmatched by any other state during the financial year 2015-16. The achievement came to light after the state energy department and the Rural Electrification Corporation collated data on electrification of villages till March 31. The Rural Electrification Corporation is the nodal agency for the scheme under the overall guidance of the Union ministry of power.

- ✓ The rural electrification work is being done as part of the Centre-sponsored Deendayal Upadhyaya Gram Jyoti Yojana under which the Union government is spending Rs 75,600 crore across the country.
- ✓ The ministry of power set a target of electrification of 1,632 villages for 2015-16 in Bihar but altogether 1,688 were electrified till the end of the financial year.
- ✓ Around 98 per cent villages in the state have been electrified and at the current pace the target of complete rural electrification could be achieved

sooner than the November 2017 (deadline fixed by the state government).

Apart from Bihar, other states that performed well were Uttar Pradesh, Odisha and Assam. They electrified 1,321, 1,277 and 1,018 villages respectively during 2015-16, but were behind the target fixed for them for the year.

Centre scales down power demand forecast. The power ministry has scaled down its projection of demand from the earlier estimated 289 giga watts (Gw) to 239 Gw by 2022. According to ministry officials, the new projection has been arrived at after taking into account slow industrial growth and its corresponding impact on power demand; lag in transmission planning; and the weak financial state of state-owned power distribution companies (discoms).

- The government's ambitious action plan called Transforming India estimates India's economic growth at 10 per cent per annum till 2032. This could help the country become a \$10-trillion economy with no poverty by that year. The plan envisages achieving 100 per cent rural electrification by May 2018.

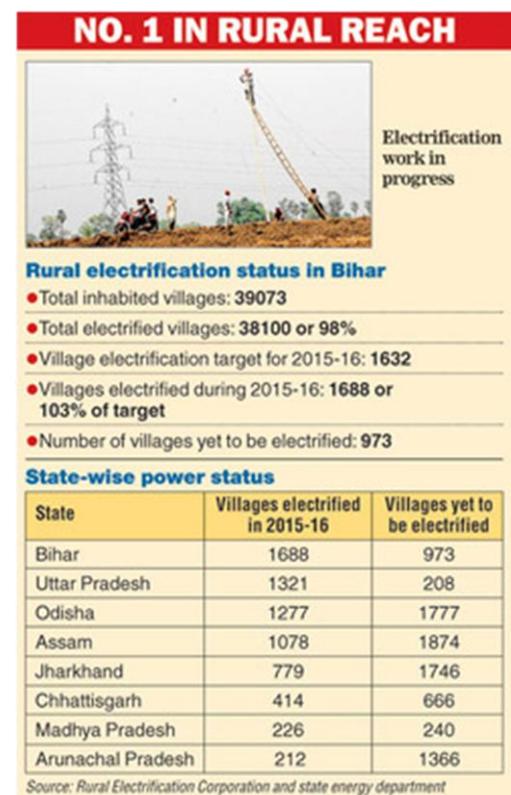


Figure 1: Status representing the villages electrified and yet to be electrified (Source: The Telegraph, 20th April 2016)

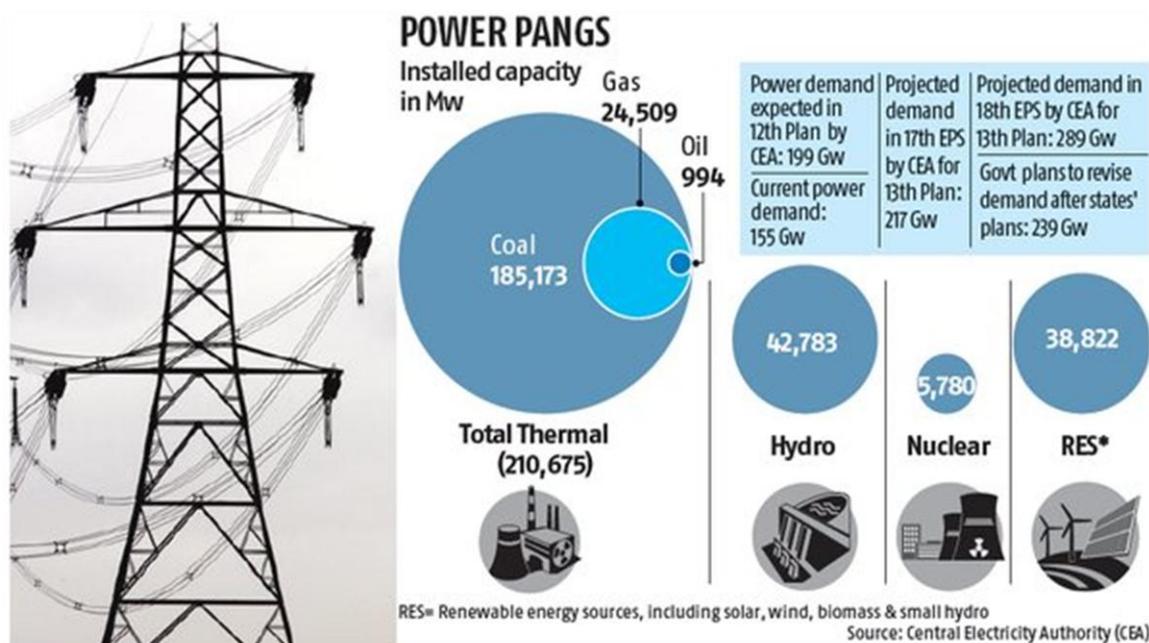


Figure 2: Slow growth, weak discoms force centre to scale down power demand forecast
 (Source: <https://twitter.com/bsindia/status/724444104172556288>)

- ✓ The new projection is based on estimated annual gross domestic product (GDP) growth rate of eight per cent. The earlier demand estimate was made in 2013, when it was assumed that demand would touch 199 Gw; it is currently 155 Gw.
- ✓ However, the government's ambitious action plan called Transforming India estimates India's economic growth at 10 per cent per annum till 2032. This could help the country become a \$10-trillion economy with no poverty by that year. The plan envisages achieving 100 per cent rural electrification by May 2018.
- ✓ NTPC had recently said one reason for low plant load factor (PLF) at its thermal power stations was due to the rising share of clean energy. It also said as the power demand remains tepid from the states, the PLF declined to 77.8 per cent in 2015 from 79.3 per cent last year and 85 per cent in 2012-13.

Times of India, 6 March 2016 | Business Standards, 18 March 2016 | Times of India, 5 April 2016 | The Telegraph, 19 April 2016 | Business Standards, 25 April 2016



LPG for every Indian household. The Pradhan Mantri Ujjwala Yojana scheme, which recognises the importance of clean cooking energy, is welcome. But we need to focus on issues of cash flow, awareness, availability and



administration. Within a fortnight of the recently announced Union Budget, the Cabinet Committee on Economic Affairs approved the Pradhan Mantri Ujjwala Yojana, earmarking Rs. 8,000 crore for it, with the aim of providing five crore subsidised Liquefied Petroleum Gas (LPG) connections to women of poor households (Below Poverty Line) in the next three years. The scheme is remarkable for two reasons.

- ✓ First, it has brought focus to the important developmental issue of enabling clean cooking energy. This is because indoor air pollution, caused by smoke from the traditional *chulha* stove leads to 1.3 million premature deaths in the country every year.
- ✓ Second, the scheme improves the quality of life of poor women whose health interests are usually neglected in household priorities.

The largest rural energy access survey of India which was conducted last year by the Council on Energy, Environment and Water (CEEW) and the Department of Political Science at Columbia University, shows that as many as 95 per cent of LPG-deprived households cite their inability to pay as a barrier to their adopting LPG.

The Hindu, 23 March 2016



Sustaining Earth Day: Renewables Investment Hits a New High. Earth Day marks the official signing of the Paris Climate Agreement at the United Nations (U.N.) New York headquarters. The Paris deal paves the way for a new era of clean energy growth, providing crucial momentum for the push toward net zero emissions — a goal that requires the near-ubiquitous use of renewables. Much of this relies on phasing out fossil fuels. In

2015,

significant strides were made in the financing of renewable energy technologies. According to the recent "[Global Trends in Renewable Energy Investment](#)" report from the U.N.'s Environment Programme (UNEP), 2015 saw record-breaking investment in

China played a key role; this country scaled up its investment by 17 percent to \$102.9 billion, accounting for 36 percent of the world's total. India and Brazil raised investment by 30 percent last year to an all-time high of \$36 billion.

renewables, totaling nearly \$286 billion globally. Significantly, for the first time, more than half of the world's new power generation capacity came from clean sources.

- ✓ Emerging economies (developed countries) invested \$156 billion in green power last year (19 percent year-over-year growth) compared to developed countries, which committed \$130 billion (down 8 percent).
- ✓ China played a key role; the country scaled up its investment by 17 percent to \$102.9 billion, accounting for 36 percent of the world's total. Meanwhile, India and Brazil raised investment by 30 percent last year to an all-time high of \$36 billion.

Given the wider agenda of energy access — perhaps best illustrated by U.N. Secretary-General Ban Ki-moon's [Sustainable Energy for All](#) initiative — this trend is extremely positive. The International Energy Agency's "[World Energy Outlook Study 2015](#)" estimates that in 2013, 1.2 billion people, 17 percent of the world's population, did not have access to electricity.

India will need 'unparalleled' \$1 trillion in energy investments by 2030: Goyal. India will need \$250 billion in the next five to six years and \$1 trillion by 2030, a scale of investment "unparalleled anywhere in the world," to fuel its race to provide energy for its people and help lift masses out of poverty, according to Piyush Goyal, the Minister for Coal, Power and New and Renewable Energy. According to him, Savvy investors will see the opportunities India has to offer them in the energy as the United States, Europe and Japan are seeing an economic slowdown coupled with a lowering of demand because of greater efficiencies in consumption.

The World Bank and others providing development assistance to developing countries have announced policies that would stop funding coal and other fossil fuel-based electricity plants.

- ✓ India sought investments in all energy spheres, its quest for energy efficiency, cleaner environment and carbon emission reduction goals – opened up other areas. As an example, the program to replace the 20 million agricultural pumps, many of them run on diesel, with more efficient and less polluting models, which have saved the equivalent of 70 billion units of electricity.
- ✓ The World Bank and others providing development assistance to developing countries have announced policies that would stop funding coal and other fossil fuel-based electricity plants.



WPC and OFID launch new initiative. Executives from major oil and gas companies and strategic partners have joined together with the OPEC Fund for International Development (OFID) and World Petroleum Council (WPC), to support the achievement of the new Sustainable Development Goals (SDGs), in particular SDG7 on universal access to sustainable energy. The 'Oil and Gas Industry Energy Access Platform (EAP)' initiative was launched by OFID and WPC in support of the Sustainable Energy for All (SE4All) multi-stakeholder platform.

The following launch statement was delivered at the meeting:

- ✓ Energy has finally achieved its rightful position at the centre of the global development agenda. The new set of Sustainable Development Goals (SDGs) that were approved in September 2015 had among them SDG 7: "Ensure access to affordable, reliable, sustainable and modern energy for all."
- ✓ This will address the needs of the 1.1 billion people lacking electricity access and the 2.9 billion people still using firewood for cooking and heating by providing them with access to safer and more efficient modern energy options, including renewable energy.

The oil and gas industry is willing to play an important role in energy poverty alleviation and its concerted efforts can become a positive contribution to the proposed SDGs as well as the objectives of the SE4All. The industry is in a unique position to use its resources – in particular its technical expertise and growing knowledge around modern energy – to develop creative solutions for providing improved access to energy and to create opportunities for replicating and scaling up investments aimed at achieving sustainable energy for all, working together with other stakeholders.

The EAP will harness the enormous potential of the industry and build upon its leadership, technology and highly relevant business experience. At the same time, the EAP will provide a platform for the Oil and Gas Companies to collaborate with other stakeholders on specific actions focused on energy access, namely:

- Share best practices, data and disseminate knowledge about energy access solutions, in particular where these solutions accelerate progress towards SDG7.
- Leverage industry capabilities to support access to energy, including modern energy and efficient solutions.
- Help the industry in identifying corporate social responsibility opportunities in host countries, and harmonise robust, practical and cost effective approaches for facing energy access challenges.
- Foster communication within industry about energy access solutions.
- Contribute to better integrate energy access in policies and projects at country level.