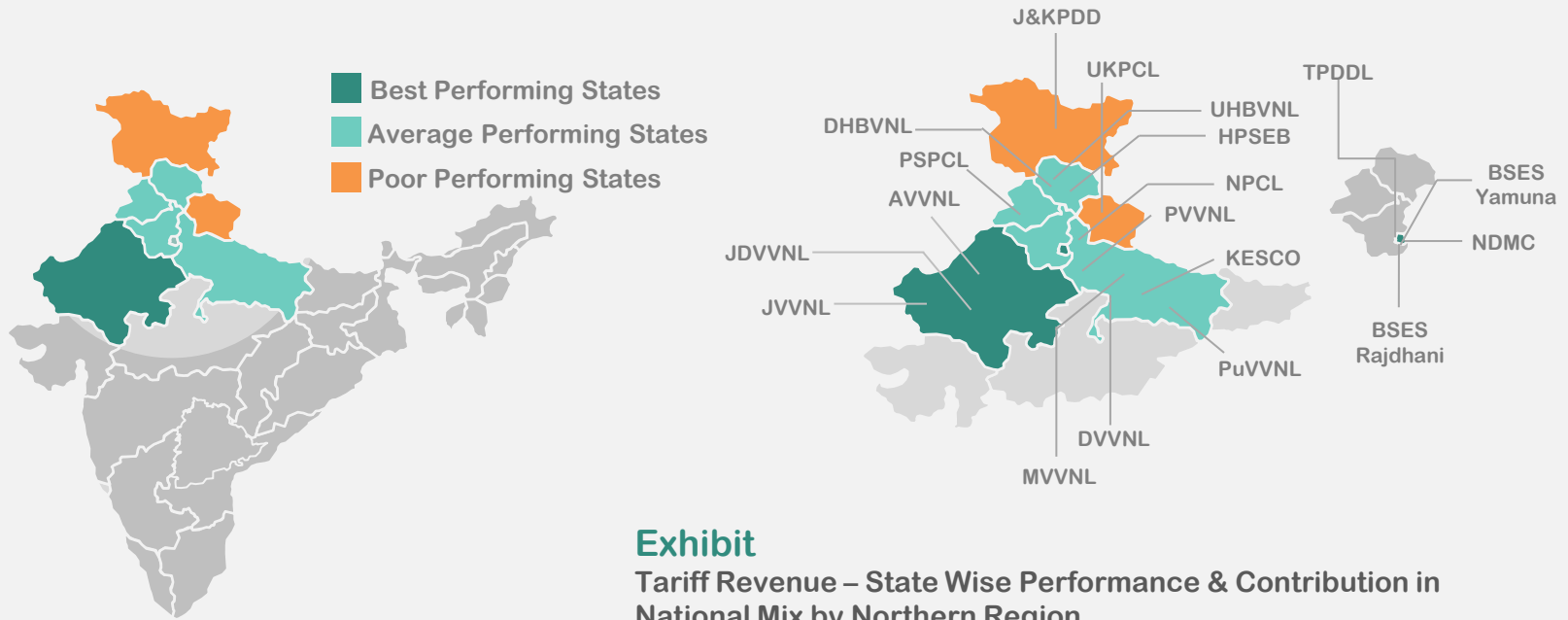


The logo for MRAC+, consisting of the letters 'MRAC' in a bold, sans-serif font enclosed in a rectangular box, with a plus sign to the right.

Power Scenario in India 2018 – State Wise Track

October 2018

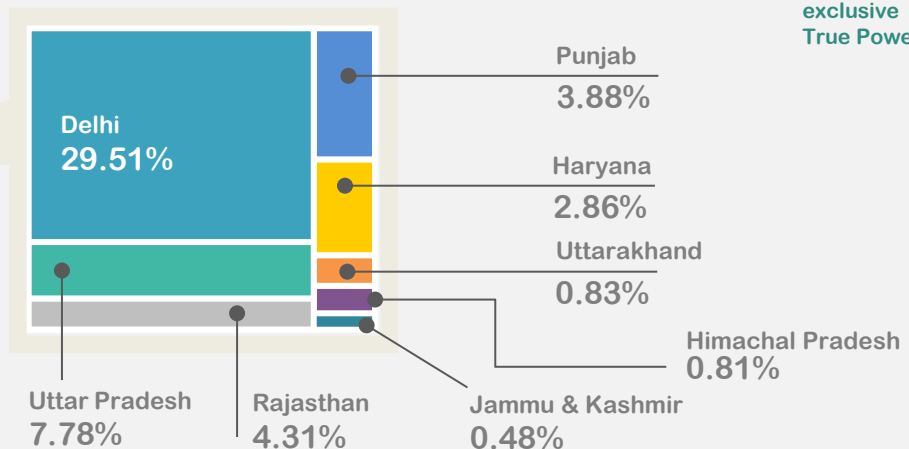
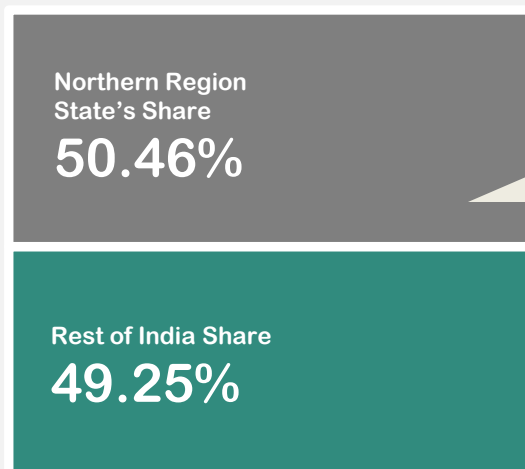
Northern Region States – Power Distribution Sector Performance Overview



Exhibit

Tariff Revenue – State Wise Performance & Contribution in National Mix by Northern Region

*Note: Based on eninrac's exclusive D2I model for True Power Assessment



Source: eninrac research & analysis

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Visit: <http://eninrac.com>

Why eninrac's report upon "Power Scenario in India - 2018"

THE GOVERNMENT'S PLAN TO GENERATE TWO TRILLION UNITS (KILOWATT HOURS) OF ENERGY BY 2019. THIS MEANS DOUBLING THE CURRENT PRODUCTION CAPACITY TO PROVIDE 24X7 ELECTRICITY FOR ALL

INDIA IS THE THIRD LARGEST PRODUCER AND THIRD LARGEST CONSUMER OF ELECTRICITY IN THE WORLD, WITH THE INSTALLED POWER CAPACITY REACHING 345.50 GW AS OF SEPTEMBER, 2018.

India is in the midst of transformation that is moving the country to central stage in many areas of global interface and energy is one such leading facet. Identified as a vibrant democracy that is home to over 1/6th of the world's population, India's infrastructure modernisation is bound to gather up speed and new policies have been introduced to unleash the further growth, which directly shall set the tone for capacity addition for power generation, transmission & distribution northbound.

With electricity production of 1,201.543 BU in India in FY18, the country witnessed growth of around 55.72 per cent over the previous fiscal year. Also, over FY10–FY18, electricity production in India grew at a CAGR of 5.69 per cent. This clearly suggests that the country has ample in offering for the value chain and market participants in terms of intermittent opportunities, however with evolving dynamics of demand-supply and policy enforcements may see the power scenario bending towards consolidation.

WITH RISING SHARE OF RENEWABLE CAPACITY & LAUNCH OF SAUBHAGYA SCHEME TO PROVIDE LAST MILE CONNECTIVITY TO RURAL HOUSEHOLDS – ADDITION IN TRANSMISSION INFRASTRUCTURE SHALL BE AN IMPERATIVE FOR THE COUNTRY

Power transmission sector in India acts a pivotal role in supplying electricity to the end consumers. It is imperative to note that the growth of power sector is dependent on the development of a robust and non collapsible transmission infrastructure. Post FY 2015, the country has witnessed a robust growth in the terms of renewable capacity addition, with solar being the flag bearer of this growth. Courtesy this, the country witnessed a shift in terms of power generation mix with renewable energy catering to 20% of the total installed capacity. Having said so, India looks to cross 400 GW mark in terms of installed capacity by FY 2022 meaning heavy transition from current inter regional transmission capacity of 78 GW.

Dedicated green energy corridors and enhancement of transformation capacity of existing sub stations, along with setting up of new sub stations will primarily drive the opportunity galore in the sector in near future.

The government plans to rope in an investment of USD 2.15 Billion till December, 2018 for electrifying approximately 4 crores of the rural households under Saubhagya Scheme. This demands, more inter regional power transmission transactions and capacity enhancement of intra regional power evacuation infrastructure.

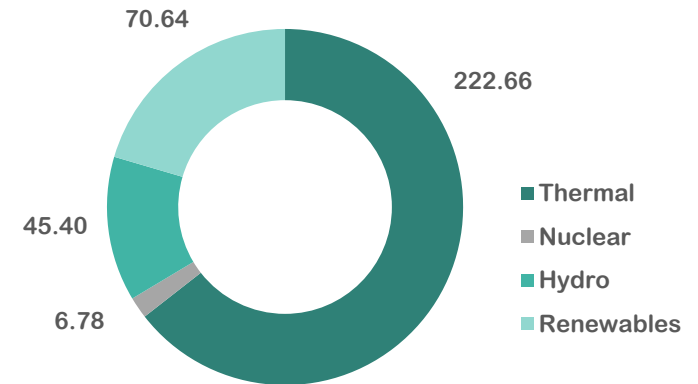
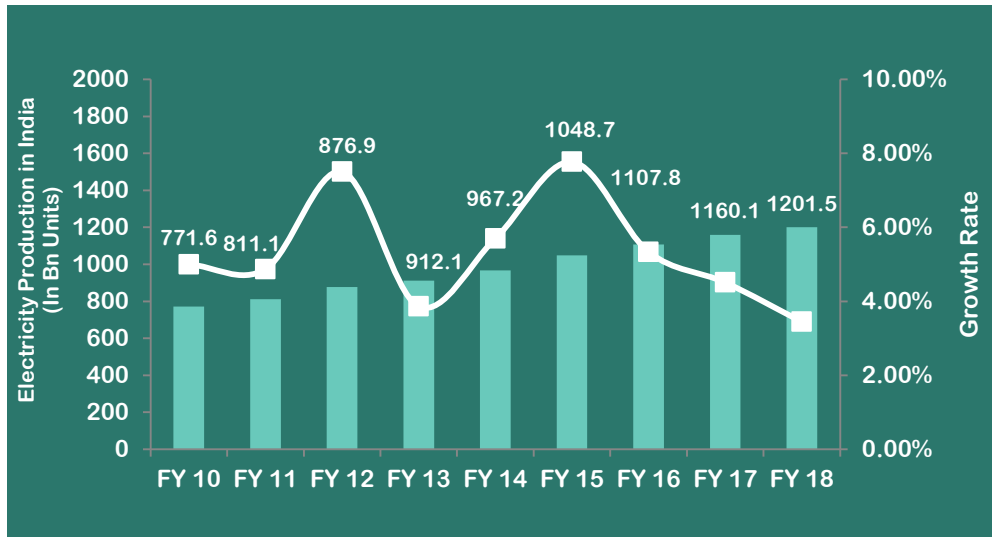
POSITIVE HEAD WINDS FOR DISCOMs AMIDST VARIOUS REFORMS AND LOWERING POWER TARIFF

The scheme of UDAY, arguably is turning out to be a saviour for most of the DISCOMs signed under it, with early signs of financial recovery being noticed. However, it won't be easy for the DISCOMs to absorb the mandate under the new PPA norms, which binds them not to abandon any PPA irrespective of the falling power tariff witnessed in the auctions of the renewable energy on the country. Although, to strike a balance between the arms of generation and distribution, this change in the PPA norm was quintessential but, it might further lead to financial constraints of the DISCOMs specially for the states like Bihar, Jharkhand, Jammu & Kashmir, Haryana and the North Eastern States.

Further economic and population growth, allied to structural trends such as urbanisation and the nature of the envisioned industrialisation, point unmistakably to a trend of continued rapid expansion in demand for energy. Recognising this challenge, Indian policy-makers are making strenuous efforts to remove obstacles to investment in energy supply, while moving ahead with complementary policies on efficiency and energy pricing that can constrain growth in consumption. The analysis and findings in this dossier on India power scenario disclose these multiple pressures and show how policies can affect the evolution of the Indian energy sector so as to realise the huge benefits that a well-managed expansion of energy provision will bring.

Through this report, Eninrac attempts to unveil the opportunities for the power generation companies, transmission utilities and distribution companies at large. Also, the scenario of Open Access and a track of discoms financial status is done to facilitate the future tendency of power sales. Queries like these and many more find their solutions in the virtue of this report which is to present opportunity verticals for the distinct sub-segments of power sector.

Exhibit: Electricity Production in India (in Bn Units) and Total Installed Capacity (in MW) as on September, 2018



Source: eninrac research & analysis, CEA

BUSINESS CASE FOR EXAMINING POWER SCENARIO IN INDIA

- Expansion in industrial activity to boost demand for electricity
- Growing population and increasing penetration and per-capita usage to provide further impetus
- Power consumption is estimated to increase from 1160.1 TWh in 2016 to 1,894.7 TWh in 2022
- Total FDI inflows in the power sector reached US\$ 14.18 billion during April 2000 to June 2018, accounting for 3.64 per cent of total FDI inflows in India
- Investment for 7 new transmission systems that includes strengthening of national grid have been sanctioned
- India's power sector is forecasted to attract investments worth INR 11.56 lakh crore (USD 179.31 billion) between 2017-2022 in thermal, hydro, nuclear and renewables segment
- Diversification into renewable sources increasing growth avenues
- 100 per cent FDI allowed in the power sector has boosted FDI inflows in this sector

REPORT INSIGHTS

- State wise analysis of Power Demand Supply Scenario
- Examining state wise Conventional Power Generation Capacity
- Examining state wise Renewable Power Generation Capacity
- Examining state wise Power Transmission Scenario
- Examining state wise Power Distribution Scenario
- Examining state Open Access Scenario
- Examining state wise RPO status and compliance status
- Benchmarking of states as per their power Generation, Transmission and Distribution scenario

KEY HIGHLIGHTS

- Indian Power Sector Overview
- Indian Power Scenario vis-à-vis Global Power Scenario
- Insights on Indian Conventional Power Generation Scenario
- Insights on Indian Renewable Power Generation Scenario
- Insights on Indian Power Transmission Scenario
- Insights on Indian Power Distribution Scenario
- Analysis of major Policy and Regulatory drivers for Indian Power Sector
- Examining Open Access Trends and scenario in India
- Evaluating challenges and way forward for Indian Power Sector

PRESS EXCERPTS

“India witnessed a tremendous growth in electricity production. Over the past seven years, electricity production grew to 34 percent, making India the third-largest producer of electricity. India has now trumped Japan and Russia, which had 27 and 8.77 percent more electricity generation capacity installed, respectively, than India seven years ago”

QRIUS

“In mid-2017, wholesale solar energy prices reached a record low in India, faster than anyone could have predicted. In February 2017, wind energy tariff had also fallen to a record low, eventually making it the cheapest source of renewable energy in India. This means India can now deploy clean and renewable energy in many more regions, making it cheaper and widely available, while cutting down on carbon emissions and fulfilling its international commitments”

The Times of India

KEY QUERIES ADDRESSED

- What is the Power scenario in different states in India?
- What is Demand supply gap / Demand – Deficit situation as per states?
- What is existing and upcoming conventional power generation capacity in India?
- What are key regions and their attractiveness indices for developing Generation & Transmission projects in India?
- Who are the best technological solution providers for developing power projects in India ?
- What is the Power Distribution Scenario of India?
- What is the Power Transmission Scenario of India?
- What is the level of AT&C Losses in various states?
- What are the financials of states’ Discoms?
- What is the existing and upcoming renewable capacity in India?
- What is the RPO status of various states?
- What is the potential of Open Access Transactions in India?

MUST BUY FOR

- Power Generation Utilities
- Power Transmission Utilities
- Power Distribution Utilities (DISCOMs)
- Original Equipment Manufacturers
- Power Traders
- Banks/Financial Institutions/Project Financing Agencies
- EPC Service Providers
- Strategic Consultants
- Management Consultants
- Research Firms/Research Institutions
- Regulatory Bodies
- Government Agencies



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vantedget⁺

THANK YOU!

Happiness does not come from doing easy
work but from the afterglow of satisfaction
that comes after the achievement of a
difficult task that demanded our best

- Theodore Isaac Rubin