

# BRIGHT FUTURE

Generation of renewable energy is steadily rising and the government must take this to the next level and reduce dependence on thermal power.

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Encouraging data from the Ministry of New and Renewable Energy show that the 2016-17 generation from alternative power sources such as wind, solar, small hydropower and biopower was close to 70 per cent of the targeted figures, with the cumulative achievements at a staggering 57,244.23 megawatts. The numbers come as a welcome development amid increasing awareness of the need to place

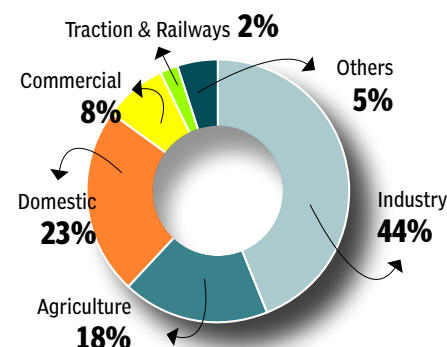
greater emphasis on alternative, greener sources of energy and lessen dependence on thermal sources, which still meet the lion's share of the country's electricity needs.

Among the green sources, wind, waste and solar photovoltaic (SPV) systems generated more than the targeted figures. According to the ministry's annual report for 2016-2017, the total indicative installable potential for wind power in the

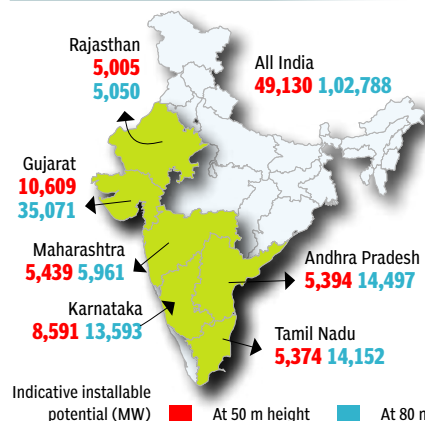
## Trends in power generation and consumption

- Total installed capacity for generation up from **1,45,755 MW** as on March 31, 2006 to **3,16,379 MW** as on March 31, 2015.
- Nuclear power saw highest rate of growth of **20.92%** from 2013-14 to 2014-15, followed by thermal power with **12.37%**.
- Thermal plants with **2,24,674 MW** accounted for **71.01%** of total installed capacity.
- Installed capacity of hydropower plants at **41,268 MW** was **13.04%** of total installed capacity.
- Share of nuclear energy only **1.82% (5.78 GW)**.
- Non-utilities accounted for **14.11% (44,657 MW)** of total installed generation capacity.
- Estimated consumption up from **4,11,887 GWh** in 2005-06 to **9,48,328 GWh** in 2014-15.

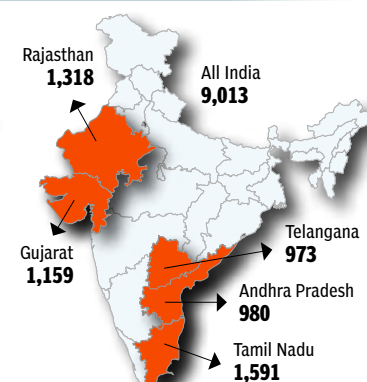
## Sectorwise consumption of electricity in India (2014-15)



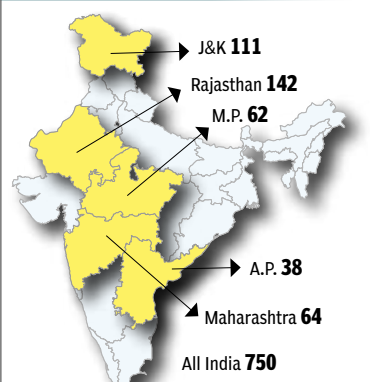
## States with high wind power potential (MW)



## Top States in solar energy installed capacity (MW)



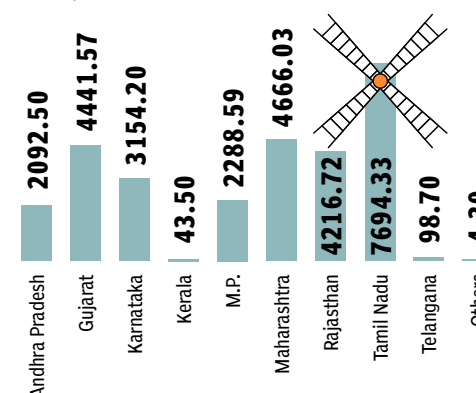
## Top States in solar energy potential (end-2016)\*



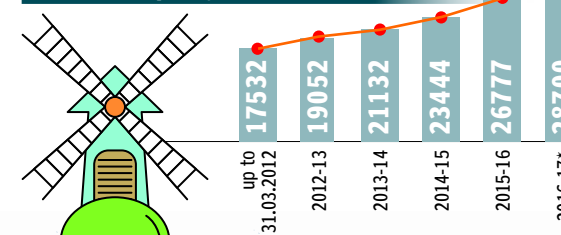
\*gigawatt peak  
Source: Ministry of New and Renewable Energy's Annual Report 2016-2017

## State-wise wind power installed capacity (MW)

Data upto 31-12-2016

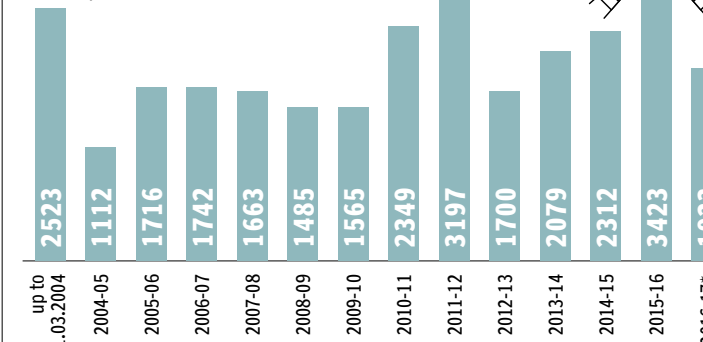


## Trend in cumulative wind power installed capacity (MW)

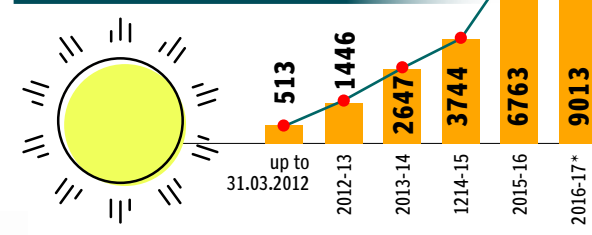


## Year-wise wind power installed capacity (MW)

\*Data upto 31-12-2016



## Year-wise solar power installed capacity cumulative growth (MW)



## Target and achievement in renewable energy (MW)

	2016-17 Target	2016-17 Achievement	Cumulative Achievements
<b>Grid-interactive power</b>			
Wind Power	4,000	5,502.38	32,279.77
Solar Power	12,000	5,525.98	12,288.83
Small Hydropower	250	105.90	4,379.85
BioPower*	400	161.95	8,181.70
Waste to Power	10	23.50	114.08
<b>Total</b>	<b>16,660</b>	<b>11,319.71</b>	<b>57,244.23</b>
<b>Off-grid and captive power</b>			
Biomass	60	-	651.91
Biomass gasifiers	10	2.80	161.45
SPV systems	100	155.51	462.54
<b>Total</b>	<b>187</b>	<b>171.07</b>	<b>1,468.95</b>

country is 49,130 MW at a height of 50 metres and 1,02,788 MW at 80 m. Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Rajasthan and Tamil Nadu were identified as the States with high potential.

In solar energy, Tamil Nadu topped the country in installed capacity with 1,591MW, followed by Rajasthan and Gujarat. Rajasthan, Jammu & Kashmir and Maharashtra were identified as States with high potential.

The total installed capacity for power generation rose from 1,45,755 MW as on March 31, 2006 to 3,16,379 MW as on March 31, 2015, with thermal plants accounting for 71 per cent (2,24,674 MW). Estimated consumption went up from 4,11,887 GWh in 2005-06 to 9,48,328 GWh in 2014-15.

Sectorwise consumption data from the Ministry of Statistics and Programme Implementation showed that in 2014-15, industry accounted for the largest share (44 per cent), followed by domestic use (23 per cent), agriculture (18 per cent) and commercial sectors (8 per cent).