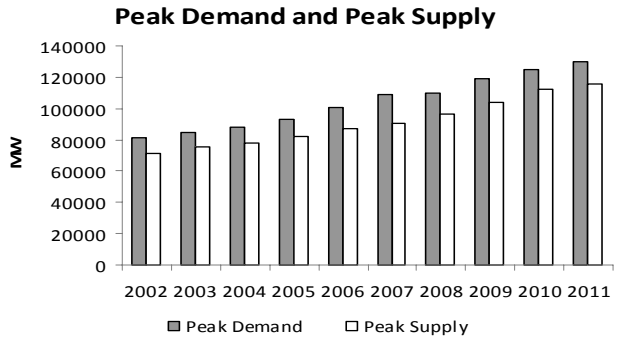
Vital Stats

Some Data on Power Supply

The deficit in the supply of electricity relative to demand at peak hours in 2011-12 was 11 per cent. While generation capacity has increased, the fuel supply situation has deteriorated. Here, we present some factors affecting the power supply situation.

Peak demand for power has not been matched by adequate peak supply



Sources: Ministry of Power Annual Report 2011-12; Central Electricity Authority

- Peak demand refers to the period of highest consumer demand for power.
- Peak demand for power increased from 81,492 MW in 2002 to 130,250 MW in 2011. Peak supply increased from 71,547 MW in 2002 to 115,847 in 2012.
- The gap between peak demand and peak supply increased from 9,945 MW in 2002 to 14,403 MW in 2011. This represents a shortage of 11 per cent of peak demand in 2011.
- India's per capita consumption of electricity in 2009 was 597 kWh, as compared to the global average of 2730 kWh.

Installed generation capacity has increased 63 per cent in the last five years

Installed generation capacity (MW)

	Installed Capacity at end of 10th Plan	Target under 11th Plan	Revised Target	Capacity added under 11th Plan	12th Plan Target
Thermal	86,015	59,693	50,757	48,540	63,781
Hydro	34,654	15,627	8,237	5,544	9,204
Nuclear	3,900	3,380	3,380	880	2,800
Total	124,569	78,700	62,374	54,964	75,785

Sources: Ministry of Power Annual Report 2011-12; Monthly Review of Power Sector for March 2012 (Central Electricity Authority); Mid-Term Assessment of the 11th Plan (Planning Commission); Press Information Bureau release dated 7th May 2012

- The Mid-Term Appraisal (MTA) of the 11th Plan revised the target for additional generation capacity from 78,700 MW to 62,374 MW. The actual capacity added during the 11th Plan period was 54,964 MW, which represents the largest capacity addition under any plan period.
- The total installed generation capacity was 202,979 MW as of 31st May 2012. Coal powered sources represent around 57 per cent of this capacity. Hydropower accounts for 19 per cent of capacity, gas for 9 per cent, renewable sources for 12 per cent and nuclear for 2 per cent.
- The achievement in hydro capacity and thermal capacity has been 67 per cent and 96 per cent of the revised target respectively.

However, coal production has stagnated

Coal production (Million tonnes)

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 MTA Target	2011-12 Actual
Demand	464	504	546	604	656	713	696
Domestic production	431	457	493	532	533	630	540
Import	43	50	56	59	73	83	99
Net gap in demand/ supply (%)	7	9	10	12	19	12	22

Sources: Mid-Term Assessment of the 11th Plan (Planning Commission); Press Information Bureau release dated 14th May 2012; Rajya Sabha unstarred question No. 1260

- Coal accounts for more than half of the installed generation capacity in the country. The target for coal production for 2011-12 was revised downward from 680 mt (million tonnes) to 630 mt. The actual coal production in 2011-12 was only 540 mt, an increase of 1 per cent over the previous year.
- Coal India Limited (CIL) accounts for around 80 per cent of the country's coal output. It produced 436 mt of coal in 2011-12, as against the MTA target of 487 mt. The growth in production over the previous year was 1 per cent.
- The total coal production target for 2016-17 is 795 mt, with CIL contributing 615 mt of this amount.

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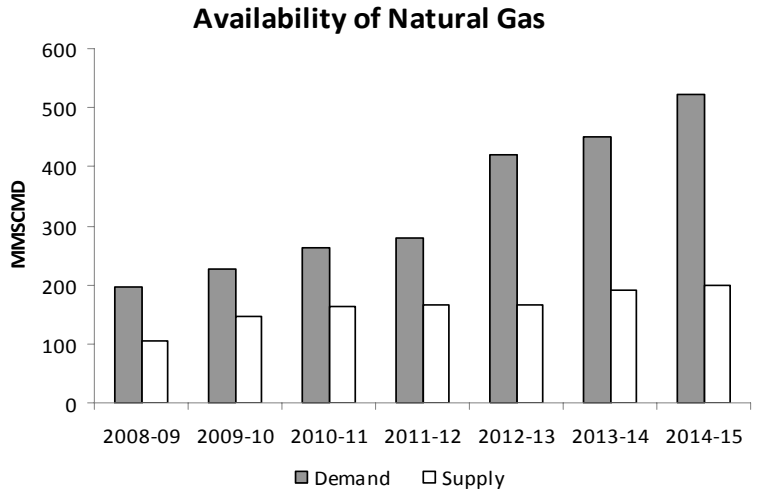
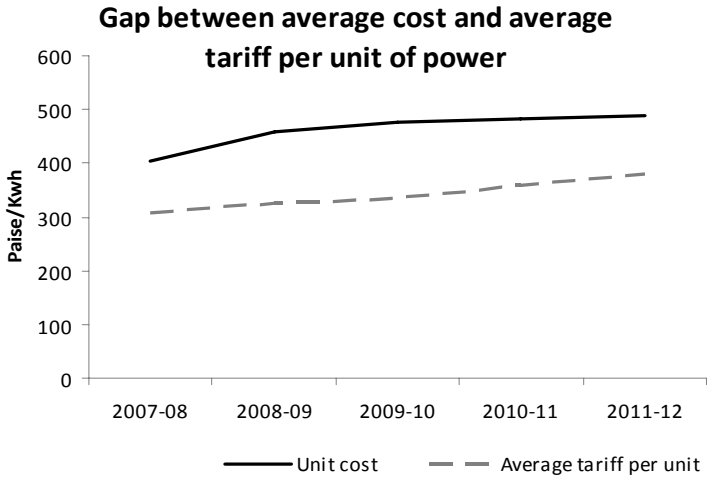
Supply of natural gas is significantly lower than demand



- The demand for gas in 2011-12 was 280 million standard cubic metres per day (MMSCMD). Of this, only 166 MMSCMD could be supplied from both domestic production and imports.
- Domestic gas availability is forecast to decline from 120 MMSCMD in 2011-12 to 104 MMSCMD in 2012-13.
- The average natural gas production from the KG-D6 block was 36 MMSCMD in February 2012, as opposed to the planned production of 70 MMSCMD. The output from KG-D6 is expected to further decline in 2012-13 and 2013-14.

Sources: Mid-Term Evaluation of 11th Plan; Report of Working Group on Petroleum & Natural Gas for the 12th Five Year Plan; Press Information Bureau releases dated 8th May 2012 and 27th March 2012

State Utility Boards and Electricity Departments face higher costs than revenues per



- The average tariff for electricity was Rs 3.8 per kWh in 2011-12, as against an average cost of Rs 4.87 per kWh. The gap between the average tariff and average cost per unit was Rs 1.08 per kWh, or 22 per cent of the cost per unit.
- The gap between average tariff and average cost per unit of electricity has ranged from between 20 per cent and 30 per cent of cost per unit in the last five years.

Source: Annual Report 2011-12 on the Working of the State Power Utilities & Electricity Departments (Planning Commission)

Electricity tariffs for industry are significantly higher than tariffs for agriculture

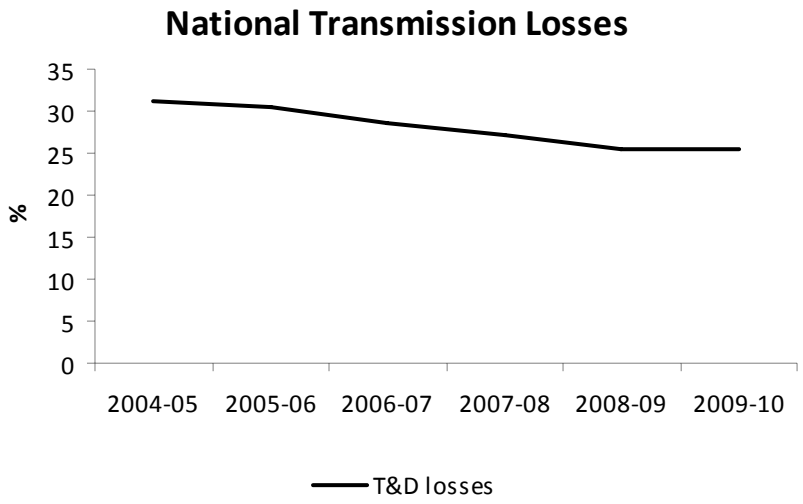
Tariffs for agriculture and industry (paise/kWh)

	Unit cost	Average tariff per unit	Gap between cost and tariff	Average tariff for agriculture	Average tariff for industry
2007-08	404	306	98	78	416
2008-09	460	326	134	95	433
2009-10	476	333	143	101	450
2010-11	484	357	127	123	478
2011-12	487	380	108	153	497

Source: Annual Report 2011-12 on the Working of the State Power Utilities & Electricity Departments (Planning Commission)

- The average tariff per unit of electricity for agriculture is significantly lower than the overall average tariff. In 2011-12, the average tariff per unit for agriculture was Rs 1.53 paise per kWh, while the overall average tariff was Rs 3.8 per kWh.
- The average tariff per unit of electricity for industry in 2011-12 was Rs 4.97 per kWh.

Transmission losses have decreased but remain significant



- Transmission & Distribution (T&D) losses are the losses incurred in transmission and distribution.
- T&D losses have also come down from 31 per cent in 2004-05 to 25 per cent in 2009-10. In addition to technical losses, these may include losses due to theft and diversion.

Source: Monthly Review of Power Sector for March 2012 (Central Electricity Authority)

Financial losses for state utilities will continue to remain significant

Forecast of performance of state utilities

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Financial Performance (Rs crore)						
Revenue	208735	229321	251687	276310	303109	334087
Subsidies and grants	36066	39493	43039	46943	51145	55780
Total revenue	244802	268815	294726	323252	354254	389867
Total expenditure	272351	296024	321291	348879	378418	411977
Profit/ loss	(27549)	(27209)	(26565)	(25626)	(24164)	(22110)
Tariffs and Costs per unit (Rs per kWh)						
Average cost per unit	4.7	4.65	4.6	4.56	4.51	4.46
Average tariff per unit	4.21	4.21	4.21	4.21	4.21	4.21
Of which subsidy	0.48	0.48	0.49	0.49	0.49	0.49
T&D losses (%)						
T&D losses	23	22	21	20	19	19

Source: Report of High Level Panel on Financial Position of Distribution Utilities

- The High Level Panel on Financial Position of Distribution Utilities has forecast financial losses for 15 states that account for 91 per cent of all energy consumed.
- The report forecasts a decline in Transmission & Distribution losses from 23 per cent in 2011-12 to 19 per cent in 2016-17.
- The losses for utilities in the top 15 states are expected to decline from Rs 27,549 crore in 2011-12 to Rs 22,110 crore in 2016-17.
- The report expects the average cost per unit of power to remain significantly higher than the average tariff per unit of power.