

**GOVERNMENT OF INDIA  
POWER  
LOK SABHA**

STARRED QUESTION NO:306

ANSWERED ON:19.12.2008

POWER GENERATION

Angadi Shri Suresh Chanabasappa;Tripathy Shri Braja Kishore

**Will the Minister of POWER be pleased to state:**

- (a) the estimated power generation capacity in the country at present, Sector-wise and Plant-wise;
- (b) whether the Government has been able to exploit the fully installed power generation capacity of power projects in the country over a period of time;
- (c) if so, the details thereof;
- (d) if not, the reasons therefor;
- (e) the steps taken by the Government to increase the power generation capacity to overcome the power shortage in the country;
- (f) whether the Government has issued guidelines to States Power Utilities to use power judiciously; and
- (g) if so, the details thereof?

**Answer**

THE MINISTER OF POWER ( SHRI SUSHILKUMAR SHINDE )

(a) to (g) : A Statement is laid on the Table of the House.

STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (g) OF STARRED QUESTION NO. 306 TO BE ANSWERED IN THE LOK SABHA ON 19.12.2008 REGARDING POWER GENERATION.

(a) : The installed power generation capacity in the country as on 30th November, 2008 was 1,46,903 MW (provisional) comprising 92,893 MW Thermal, 36,648 MW Hydro, 4,120 MW Nuclear and 13,242 MW of Renewable Energy Sources (RES). The sector-wise details are given below :

Category Central State Private Total

Thermal	35,759	47,112	10,021	92,892
Hydro	8,592	26,826	1,230	36,648
Nuclear	4,120	0	0	4,120
RES @	0	2,248	10,995	13,243
Total	48,471	76,186	22,246	1,46,903

@ Renewable Energy Sources (RES) includes Wind, Small Hydro Project, Biomass Power, Biomass gasifire, Urban & Industrial Waste Power and Solar Energy.

The details of State-wise and Plant-wise installed power generation capacity in the country are given at Annex.

(b) to (d): The utilization of installed capacity of a generating unit is linked to the type of generation. While the thermal units are meant to be utilized continuously as base-load units, hydro units are to be utilized depending on availability of water / reservoir level. Thus, utilization of installed capacity is effectively applicable to thermal (including nuclear) generating units and is expressed in terms of Plant Load Factor (PLF). The PLF of thermal and nuclear units depends on a number of factors such as vintage of the unit, forced and planned outages, availability of required quality and quantity of fuel, etc. Indicator of performance of hydro generating unit is its availability (excluding the time required for its planned maintenance and attending to forced outages). Beyond the machine availability, in hydro units, the generation is generally dependent on the availability of water and actual hydrology at the plant site.

The details of utilization of Thermal and Nuclear Power Plants in terms of PLF during the last three years (2005-06, 2006-07 and

2007-08) are given below :

Year	Thermal		Nuclear	
	Target (%)	Actual (%)	Target (%)	Actual (%)
2005-06	74.7	73.6	58.8	63.2
2006-07	76.3	76.8	59.7	57.5
2007-08	77.1	78.6	61.0	46.4

The availability of hydro machines for the years 2005-06, 2006-07 and 2007-08 was 89.2%, 89.3% and 92.0% (provisional) respectively.

(e) : The Government has taken the following steps to increase power generation capacity to overcome power shortage in the country :

i) A capacity addition target of 78,700 MW from conventional energy sources and 15,000 MW from new and renewable sources has been set for the 11th Plan. On the basis of the latest assessment, capacity addition of 79,790 MW is feasible from the conventional energy sources during the 11th Plan, out of which 11,322 MW has been commissioned till 30th November, 2008 and balance capacity of 68,468 MW is under construction.

ii) Development of a number of Ultra Mega Power Projects of 4,000 MW each under competitive bidding.

iii) Harnessing surplus captive power into the grid. A capacity of 12,000 MW of captive power is likely to be added to the system during 11th Plan.

iv) Development of approximately 10,000 MW capacity through the merchant power plant initiative.

v) Launch of 50,000 MW hydro initiative for accelerated development of hydro power in the country. Preliminary feasibility reports of 162 projects totaling 48,000 MW were prepared, out of which 77 projects with total capacity of about 37,000 MW having an expected first year tariff of less than Rs.2.50 per unit, were selected for execution. The allotment for execution of these projects rests with the host State Governments.

vi) Rigorous monitoring of capacity addition of the ongoing power generation projects.

vii) Sensitizing the industry to the need for increasing equipment manufacturing capacity and widening the vendor base for Main Plant equipment and Balance of Plants like Coal Handling Plant, Ash Handling Plants, Water Treatment Plant, etc., by organizing international conclaves, regional workshops, etc. Other areas like advance procurement of critical materials and tie up of necessary funds before construction are also being addressed.

(f) & (g) : No, Sir. However, the provisions of the Energy Conservation Act, 2001, are being used to enforce the efficient use of energy and its conservation. The Bureau of Energy Efficiency (BEE) and the State Designated Agencies (SDAs) are the implementing agencies.