

**GOVERNMENT OF INDIA  
POWER  
LOK SABHA**

UNSTARRED QUESTION NO:4987

ANSWERED ON:02.09.2011

POWER PROJECTS USING SUPER CRITICAL TECHNOLOGY

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

- (a) whether thermal power projects based on super-critical technology using less quantity of coal are proposed to be set up in the country;
- (b) if so, the details thereof along with the per unit cost of production of power;
- (c) whether the said technology can be used in small projects also; and
- (d) if so, the details thereof?

**Answer**

THE MINISTER OF STATE IN THE MINISTRY OF POWER (SHRI K.C. VENUGOPAL)

(a): Yes, Madam. Large numbers of super-critical units are under construction in the country.

(b): A capacity of about 4000 MW is likely to be added in the 11th Plan through super-critical units of which about 1980 MW has already been commissioned so far. In the 12th Plan, about 50% to 60% coal fired capacity addition is expected to be from super-critical units.

As regards per unit cost of production of power, the cost of power depends on number of factors like the cost of equipment, cost of financing, project implementation period, operating efficiency, O&M expenses, fuel cost etc. Super-critical technology is more efficient than the conventional sub-critical technology and higher super-critical parameters of 565/593 deg. C can lead to about 5% savings in fuel consumption as compared to typical 500 MW sub critical units. However, the super-critical technology being a new technology may involve higher capital cost for initial units and a part of the higher capital cost may get offset by savings in fuel. Further, with new manufacturing entities being set up in the country, there may be reduction in capital cost in the long run.

(c): Generally, the super-critical technology is presently being adopted for large size units to achieve benefit of economies of scale and faster capacity addition.

(d): In view of (c) above, does not arise.