

**GOVERNMENT OF INDIA
POWER
LOK SABHA**

UNSTARRED QUESTION NO:3347

ANSWERED ON:13.12.2012

POWER PROJECTS USING SUPER CRITICAL TECHNOLOGY

Panda Shri Baijayant

Will the Minister of POWER be pleased to state:

- (a) whether the Government has taken any step to reduce the consumption of coal while producing power in various thermal power plants in the country;
- (b) if so, the details thereof;
- (c) whether the Government has initiated a process to consider using supercritical technology in various power projects for generating electricity;
- (d) the details thereof along with the power generation therein;
- (e) whether ultra mega power projects are also being envisaged to be set up with super-critical technology; and
- (f) if so, the details thereof?

Answer

THE MINISTER OF STATE (INDEPENDENT CHARGE) OF THE MINISTRY OF POWER (SHRI JYOTIRADITYA M. SCINDIA)

(a) & (b) : Yes, Madam. The following steps have been taken to improve the efficiency and reduce fuel consumption in thermal power generation.

(i) The unit sizes and steam parameters of thermal generating units have been constantly increased.

(ii) Supercritical technology has been adopted for coal fired power generation. The Supercritical units with steam parameters of 565/593 deg C are expected to have lower fuel consumption by about 5% as compared to typical 500 MW sub-critical units in the country.

(iii) Renovation and Modernization (R&M) and Life Extension (LE) of existing old power stations has been adopted which provide an opportunity to get additional generation at low cost in short gestation period.

(iv) Phased retirement of old units running on low efficiency and low Plant load factor where Renovation and Modernization (R & M) is not feasible. A capacity of 2398 MW has already been retired during 11th Plan and about 4030 MW is planned to be retired during the 12th Plan.

(c) & (d) : Yes, Madam. The details of the thermal power generation using supercritical technology are given below:

(i) The first supercritical unit of 660 MW was commissioned in the country in December, 2010. At present fourteen supercritical units with total capacity of 9660 MW are operational. Of this, Supercritical Capacity totaling about 6080 MW was commissioned during 11th Five Year Plan.

(ii) During the 12th Five Year Plan about 25,000 MW capacity addition is planned to be based on Supercritical technology.

(iii) Total generation from supercritical units in the year 2012-13 (upto Nov- 2012) was 23072 Million Units (MUs). Details are also given in Annex.

(e) & (f) : Yes, Madam. Ultra Mega Power Projects (UMPPs) are envisaged to be put up with super-critical technology. So far, four UMPPs have been awarded to the successful bidders selected through tariff based competitive bidding. As per the Request for Proposal (RfP) of these awarded UMPPs, the Bidder is required to submit an undertaking along with its RfP bids that the units shall be based on super-critical technology.