

(b) if so, the details thereof;

(c) whether Government proposes to sanction the funds required for the said purpose; and

(d) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF POWER (SHRI RAJ KUMAR SINGH): (a) and (b) The State Government of Jharkhand has not sought additional financial assistance from Government of India for increasing power generation in the State.

(c) and (d) Questions do not arise.

#### **Energy efficiency in the area of air conditioning**

2383. SHRI SUSHIL KUMAR GUPTA: Will the Minister of POWER be pleased to state:

(a) whether it is a fact that the Ministry has asked the air-conditioner manufacturers to regulate default setting of the units they make in order to promote energy efficiency in the area of air-conditioning;

(b) if so, the details thereof;

(c) whether any study has been carried out by the Bureau of Energy Efficiency in this regard; and

(d) if so, what are the suggestions and findings of this study?

THE MINISTER OF STATE OF THE MINISTRY OF POWER (SHRI RAJ KUMAR SINGH): (a) and (b) During summer, it is estimated that in a typical building, air conditioning consumes the maximum amount of electricity, which accounts for more than 50% in case of commercial or residential buildings.

An increase in air conditioning temperature of room by 1 degree Celsius (°C), saves about 6% of electricity. Generally, air conditioning temperature is set between 20-21 °C, whereas the ideal/optimal temperature is 24-26 °C. Change in air conditioning temperature from 20 °C to 24 °C, will save about 24% of electricity. This will reduce emissions and thereby be good for the environment; it will save money, and it is also good for health.

With an objective to promote energy conservation in space cooling, Bureau of Energy Efficiency (BEE), under the guidance of Ministry of Power, have developed voluntary guidelines recommending air conditioning temperature setting at an optimal

level of 24-26 °C. To take forward this initiative, a meeting was held with the manufacturers of Air Conditioner (AC) on 22nd June, 2018, wherein it was suggested to explore the technical feasibility for default temperature setting of AC at 24 °C.

The above mentioned voluntary guidelines have been recommended for implementation in large commercial establishments, such as, Hotels, Airports, public office complexes and large institutions.

(c) and (d) No separate study has been carried out by BEE in this regard. BEE has referred to IIT Kharagpur Publication (112105129 version 1 ME) which recommended operative and optimum temperature of 24.5 °C for summer season with appropriate clothing at 50% relative humidity and 0.15 m/sec air velocity. Further, the technical analysis done by American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) also indicates that in order to achieve desired comfort level at steady state, the temperature setting can be between 24-25 degree Celsius, at desired levels of humidity and air movement.

#### **Over utilisation of thermal power stations**

2384. SHRI A.K. SELVARAJ: Will the Minister of POWER be pleased to state:

(a) whether it is a fact that thermal power stations operated beyond their targets to bridge supply gap left by hydel units which saw generation dropping to 88 per cent of estimates as reservoirs ran low;

(b) if so, the details thereof;

(c) whether it is also a fact that some power plants ran at 103 per cent of their scheduled production target in April-May period; and

(d) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF POWER (SHRI RAJ KUMAR SINGH): (a) and (b) Generation from all sources (Hydro, Nuclear, Thermal and Renewable Energy) is utilized to meet the demand of electricity. The gap between demand and supply, if any, is met by increasing the thermal power generation. During April and May, 2018, hydro generation was 87.29% and 90.35% of the target respectively. The gap due to less generation from hydro power plants was met by increasing generation from thermal power plants which generated 103-104 % of the target. Details of Category-wise generation from conventional sources for April, 2018 and May, 2018 are given in the Statement (*See below*).

(c) and (d) Yes, Sir. The details of Coal based power plants which operated at