GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.2613
TO BE ANSWERED ON 27.12.2018

ENERGY EFFICIENCY

2613. DR. UDIT RAJ:

Will the Minister of POWER be pleased to state:

(a) whether the air-conditioner manufacturers have been directed to regulate default setting of the AC units in order to promote energy efficiency;

(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, the details and the outcome thereof?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER AND NEW & RENEWABLE ENERGY

(SHRI R. K. SINGH)

(a) & (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 by 1 degree Celsius (^{0}C), saves about 6% of electricity. Generally, air conditioning temperature is set between 20-21 ^{0}C, whereas the ideal/optimal temperature is 24-26 ^{0}C. Change in air conditioning temperature from 20 ^{0}C to 24 ^{0}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) have developed voluntary guidelines recommending air conditioning temperature setting at an optimal level of 24-26 ^{0}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 ^{0}C.

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

(c) & (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^{0}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.

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