

Recommended Guidelines

Subject: Energy Conservation in Building Space Cooling through recommended optimum temperature setting

Bureau of Energy Efficiency (BEE) under the aegis of **Ministry of Power (MoP)** implementing various energy efficiency and conservation schemes stipulated under Energy Conservation Act 2001, with the primary objective of reducing the energy intensity of Indian economy. Bureau in consultation with Ministry of Power, also develops policies and strategies that emphasize self-regulation and market principles to achieve objectives of energy conservation and energy savings. As per clause 14 (t) of the EC Act 2001, Central Govt. shall take “all measures necessary to create awareness and disseminate information for efficient use of energy and its conservation”.

With the objective to reduce energy intensity, in the area of space cooling, BEE initiated Star Labeling of Air Conditioners to improve efficiency in commercial and residential buildings. Thereafter, the Energy Conservation Building Code (ECBC) was published to reduce demand for space cooling. It is estimated that by increase in temperature of room by 1 degree Celsius ($^{\circ}\text{C}$), we can save about 6% of electricity. Typically, room temperature is set between 20-21 $^{\circ}\text{C}$ whereas, as per the comfort chart, it is suggested that ideal temperature could be maintained around 24-25 $^{\circ}\text{C}$. Considering change from 20 $^{\circ}\text{C}$ to 24 $^{\circ}\text{C}$, there exists potential to increase at least 4 degree Celsius, which may lead to savings of about 24% of electricity consumption. Annually, this may translate to saving potential of about 20 billion units of electricity, by taking simple measures like adjusting the temperature setting of AC system to 24 $^{\circ}\text{C}$.

In this context, Bureau of Energy Efficiency, Ministry of Power recommends following to the consumers:

- 1. All consumers of commercial buildings are suggested to maintain the internal temperature between 24-25 $^{\circ}\text{C}$ with appropriate humidity and airflow to conserve energy and for the health benefits of occupants, subject to operational and functional requirement.**
- 2. These guidelines are mostly applicable for large premises such as Airports, Hotels, Shopping Malls, Offices and Government Buildings (Ministries & attached offices, State Government, and Public Sector Undertakings), having huge potential for savings.**
- 3. Personnel responsible for operation and maintenance of air conditioning/cooling system may be suitably counseled to maintain such parameters without adversely affecting the comfort conditions.**
- 4. Above guidelines may not be applicable for premises where specific ambient conditions are required e.g. health care facilities/operation theatre/Food processing installations/Data Centers, etc.**
- 5. The consumers may also take any other appropriate measures to save energy.**
- 6. Any deviation of such Guidelines should normally be considered with the approval of head of the organization.**
- 7. The above suggestions are not applicable for winter climatic conditions.**

**Director General
Bureau of Energy Efficiency**

**New Delhi
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