



सत्यमेव जयते

No.21013/1/2019-G.A
Government of India
Ministry of Jal Shakti
Deptt. Of Water Resources, RD & GR

Shram Shakti Bhawan, Rafi Marg,
New Delhi, dated 24th July, 2019.

OFFICE MEMORANDUM

Subject: Energy Conservation in Building Space Cooling through optimum temperature setting- regarding.

The undersigned is directed to forward herewith a copy of the D.O. letter No.F.11/3/2018-EC dated 11.07.2019 received from Hon'ble Minister for Jal Shakti along with enclosures on the subject mentioned above and to request that the Air Conditioners in Central Government Offices should not be set below 24° Celsius to reduce the energy consumption and operational costs in the Government Buildings .

Encl. As above.

(A K Kaushik)

Under Secretary to the Govt. of India
Tel. No. 011-23738126

Copy to:-

1. PPS to Hon'ble Ministry for Jal Shakti.
2. PPS to Hon'ble MoS for Jal Shakti.
3. PPS to Secretary, Department of Water Resources, RD &GR.
4. PPS to Additional Secretary, Department of Water Resources, RD &GR.
5. PPS to All Joint Secretaries, Department of Water Resources, RD &GR.
- 6 PPS to Economic Advisor, Department of Water Resources, RD &GR.
6. All Director/ Deputy Secretaries, Department of WR, RD& GR.
7. Under Secretaries/ Section Officers, Department of WR, RD &GR.
- 7 Heads of All Organizations/ Offices/ PSUs under the Department of Water Resources, RD &GR to comply with the directions of the Hon'ble Minister for Jal Shakti.

आर. के. सिंह
R. K. SINGH



विद्युत एवं नवीन और नवीकरणीय ऊर्जा
राज्य मंत्री (स्वतंत्र प्रभार) एवं
कौशल विकास और उद्यमशीलता राज्य मंत्री
भारत सरकार

Minister of State (Independent Charge)
for Power and New & Renewable Energy and
Minister of State in the Ministry of Skill Development
and Entrepreneurship
Government of India

D.O. No. 11/3/2018-EC

Dear Shri Shekhawat Jee,

We have made international commitment to reduce our carbon footprint. In our Nationally Determined Contribution undertaken as per the Paris accord; we have pledged to ensure that by 2030 we shall reduce the emission intensity of our GDP by 33 to 35% as compared to 2005 levels. Energy efficiency has a major role to play in this.

The Buildings sector in India consumes over 30% of the total electricity consumed in the country. Within the buildings sector, government buildings are a major source of electricity consumption.

Government of India recognise that as a large energy user, it needs to contribute towards achieving the national energy efficiency and emissions targets, through improvements in its own operations. It has been observed that implementation of energy efficiency measures in government buildings will go a long way towards inculcating the culture of energy efficiency in other sectors of the country. This will also reduce the Government's energy use and operational costs.

The regulatory framework for efficient use of energy and its conservation is governed by the Energy Conservation Act, 2001. Bureau of Energy Efficiency (BEE) has been set up under the provisions of this Act to facilitate and coordinate energy-efficiency activities at the central level. The mission of BEE is to develop policies and strategies with a thrust on self-regulation and market principles, within the overall framework of the Act, with the primary objective of reducing the energy intensity of the Indian economy.

Space cooling accounts for around 30 to 40% of total consumption of electricity in commercial buildings. Initiatives of BEE to reduce energy intensity in the area of space cooling include star labelling of air conditioners (ACs) and Chillers, publication of Energy Conservation Building Code (ECBC) for commercial buildings and more recently, Energy Conservation through optimum temperature setting of air conditioners (ACs) at 24-26 degree Celsius. BEE has estimated that by increase of temperature setting of an air conditioner by one degree Celsius, we can save about 6% of electricity. Typically, room temperature is set between 20-21 degrees Celsius, whereas as per the comfort chart, the thermostat should be set

Contd. 2/





अनुवर्ती/Continuation....

- 2 -

between 24-25 degrees Celsius with due consideration to parameters like humidity, air flow etc. This could result in substantial savings in electricity consumption and consequent reduction in GHG emissions, enabling the country to meet its Nationally Determined Contribution (NDC) targets. A copy of BEE guidelines cum advisory issued in this regard is enclosed.

It may be recalled that with the objective of reducing the Government's energy consumption and operational costs, replacement of conventional bulbs with LED based lighting has been mandated in all the Government buildings, including attached/subordinate/autonomous organisations and PSUs. Taking this initiative further, it has now been decided that the Central Government should take a lead in mandating that air conditioners in every government office is not set below 24 degree Celsius. I shall be grateful for your personal attention in this regard.

With regards,

Yours sincerely,

Encl : as above

(R.K. Singh)

Shri Gajendra Singh Shekhawat
Hon'ble Minister of Jal Shakti
Ministry of Jal Shakti
Shram Shakti bhawan, Rafi Marg, New Delhi - 110001

Arch
Secy (WR)
Secy (DWS)



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
June 25, 2018