

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.2169
TO BE ANSWERED ON 04.07.2019**

ADVERSE HEALTH EFFECTS OF LED BULBS

**2169. SHRI ANTO ANTONY:
SHRI BALASHOWRY VALLABHANENI:**

**Will the Minister of POWER
be pleased to state:**

- (a) whether the Government is encouraging the use of LED bulbs/lights and if so, the details thereof and the reasons therefor;**
- (b) whether the Government has noticed that recent study in France reveal that the use of LED lights is photo-toxic and can cause damage to retina and if so, the details thereof;**
- (c) whether it is scientifically proven and if so, the details thereof;**
- (d) whether the Government has carried out any study to find out the impact of exposure of LED lights on eyes and if so, the details thereof; and**
- (e) if not, whether the Government proposes to conduct the same in near future and if so, the details thereof?**

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER, NEW & RENEWABLE ENERGY AND THE MINISTER OF STATE FOR SKILL DEVELOPMENT & ENTREPRENEURSHIP

(SHRI R.K. SINGH)

(a) : Hon'ble Prime Minister launched the National LED Programme on 5th January, 2015 which has two components (i) Unnat Jyoti by Affordable LEDs for All (UJALA) to provide LED bulbs to domestic consumers, and (ii) Street Lighting National Programme (SLNP) to replace conventional street lights with energy efficient LED street lights. Energy Efficiency Services Limited (EESL), a JV of PSUs under the Ministry of Power is the implementing agency of the programme. The objectives of the National LED Programme is to (i) to reduce energy consumption in lighting sector which helps DISCOMs to manage peak demand, and (ii) to promote the use of the most efficient lighting technology at affordable rates to domestic consumers leading to reduced energy bill.

As on 28th June, 2019, EESL has distributed over 35.16 crore LED bulbs and installed over 92 lakh LED street lights across India.

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(b) to (e) : As per the information received from the Indian Council of Medical Research (ICMR), a white paper of the French Agency for Food, Environmental and Occupational Health and Safety regarding LEDs has concluded that acute exposure to blue rich lights causes retina photo toxicity and exposure to blue rich lights in evening and night causes disruption of circadian rhythms.

Further, Central Power Research Institute (CPRI), an autonomous organization under Ministry of Power has informed that looking straight into bright, point-like sources of light such as LED bulbs, clear filament and including the sun can cause damage to eyes. Further, lamps not conforming to relevant standards may pose hazards to skin and eye.

The Government has not carried out any separate study to find out the impact of exposure to LED lights. However, the Bureau of Indian Standards (BIS) has mandated safety and performance standards for LED bulbs and LED tube lights. Further, recognizing the photo-biological impact of light sources, BIS has also mandated standards on photo-biological safety of Lamps and Lamp systems. The Indian standards for LED Lamps and LED Tube light [IS 16102 (Part 1) and IS 16614 (Part 1)] includes mandatory marking requirement for photo-biological hazard-related risk group labeling of lamps as given in IS 16108 (Part 2). At present, there is no specific proposal to conduct any separate study to find out the impact of exposure of LED lights.

LED bulbs procured by EESL under UJALA scheme conform to Quality Control Measures i.e. IS 16102 (Part 1) and (Part 2): 2012 specified by BIS. These standards have been made mandatory in May, 2015 by BIS and are applicable to domestic manufacturing as well as imports.

LED bulbs are placed under mandatory regime of Star labeling program of the Bureau of Energy Efficiency (BEE) w.e.f. 1st January, 2018. As part of this programme, it is mandatory for the manufacturers of LED bulbs to submit photobiological test report for respective LED bulb model in accordance with the National Standard IS 16108- Photobiological Safety of Lamps and Lamp Systems.
