

**GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN AFFAIRS**

LOK SABHA

**UNSTARRED QUESTION NO. 4222
TO BE ANSWERED ON MARCH 19, 2020**

IMPACT OF BUILDINGS WITH GLASS FACADES

NO. 4222. DR. VISHNU PRASAD M.K. :

Will the Minister of HOUSING AND URBAN AFFAIRS be pleased to state:

- (a) whether energy conservationists are cautioning against growing number of buildings with glass facades which affect the global warming and if so, the details thereof;**
- (b) whether any norms have been framed allowing glass facades in buildings, especially to address safety and security concerns as they lead to quick increase in temperature and if so, the details thereof; and**
- (c) whether a complete glass building consumes electricity four times more than a normal building as per the study done by IITs and if so, the details thereof?**

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE) OF THE

MINISTRY OF HOUSING AND URBAN AFFAIRS

(SHRI HARDEEP SINGH PURI)

- (a) No such reference has been received by the Government.**
- (b) The Bureau of Indian Standards (BIS) has issued Code of Practice for use of glass in buildings (IS 16231) in 2019 covering aspects like general methodology for selection, energy and light, fire and loading and safety related to human impact.**

The National Building Code 2016 has provisions for use of glass based on their thermal properties to optimize solar load while also taking care of the safety concern in buildings.

Further, Ministry has framed Model Building Bye Laws 2016, which prescribes norms and standards for using glass façades in buildings to address quality, fire safety and security issues.

In addition, the Energy Conservation Building Code (ECBC) 2017 prescribes minimum energy performance standards for building envelopes including glass facades for the parameters like energy and heat transmission, solar heat gain and visible light transmission. ECBC compliance has been recommended for commercial buildings.

- (c) As per study done by Shri M.C. Singh and Shri S.N. Garg of Centre for Energy Studies, IIT Delhi in July, 2011 titled 'Suitable glazing selection for glass curtain walls in tropical climates of India', though glass façade leads to higher energy consumption in buildings, the actual quantum of consumption depends on various factors viz. building type, glazing type, glazing orientation and climate type.**
