

**GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS**

**LOK SABHA
UNSTARRED QUESTION NO. 2653
TO BE ANSWERED ON 3RD JANUARY, 2018**

RADIATIONS FROM MOBILE TOWERS

2653. SHRIMATI VANAROJA R.:

Will the Minister of COMMUNICATIONS be pleased to state:

- (a) whether one lakh new towers are required annually to expand and provide seamless services across the country including 4G and proposed 5G and internet of things;
- (b) if so, the details thereof and the steps taken by the Government in this regard; and
- (c) whether the Government has conducted any study on ill-effects of mobile tower radiations and if so, the details and the outcome thereof?

ANSWER

**THE MINISTER OF STATE (IC) OF THE MINISTRY OF COMMUNICATIONS &
MINISTER OF STATE IN THE MINISTRY OF RAILWAYS
(SHRI MANOJ SINHA)**

(a) & (b) Presently, three generations of mobile services - 2G, 3G and 4G have been made available for commercial use in the country. In order to provide access to the subscribers, Telecom Service Providers (TSPs) install necessary telecom equipment including towers throughout the country. Further, TSPs make use of different spectrum bands such as 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2500 MHz for providing mobile services. As per radio-propagation characteristics, each spectrum band has different area of radio-coverage. Besides, number of mobile subscribers have been gradually increasing and the demand pattern from the subscribers may also vary depending upon time and location.

Further, local access provided by a Base Transceiver Station (BTS) serves many mobile users at a time and therefore, the data speed and resources are shared by such concurrent users.

In order to ensure interest of mobile subscribers, Telecom Regulatory Authority of India (TRAI) has prescribed technical benchmarks for assessing performance of mobile networks on regular basis. However, no annual target has been prescribed by TRAI in terms of mobile towers to be installed for mobile services in the country.

To expand the mobile network coverage across the country in effective and time-bound manner, the Department has taken many initiatives including.

- (i) making available sufficient spectrum for mobile services- auction of 965 MHz in 2016,
- (ii) allowing Spectrum Sharing, Trading and liberalisation of administratively allocated spectrum as per the guidelines to facilitate efficient utilisation,
- (iii) permitting sharing of active as well as passive infrastructure by the telecom service providers for achieving higher efficiency,
- (iv) notification of Indian Telegraph Right of Way Rules, 2016 for regulating underground infrastructure (optical fibre) and over-ground infrastructure (mobile towers),

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- (v) facilitating use of Government estate for installation of mobile towers on multiple-sharing basis,
 - (vi) periodic review of expansion of mobile networks and related improvements carried out by the service providers- leading to addition of around 6.35 lakh additional Base Transceiver Stations (BTS) on aggregate basis for 2G/3G/4G services during the period- July 2015 to November 2017. As on 1st December 2017, 645396 numbers of 2G BTSs, 353845 nos. of 3G & 676462 nos. of 4G BTSs, with the total of 16.75 lakhs of BTS are installed throughout the country.
- (c) The Government has considered the issue and has conducted the following studies to understand possibility of ill effects of mobile tower radiations:
- (i) An Inter-Ministerial committee (IMC) consisting of officers from Department of Telecommunications (DoT), Indian Council of Medical Research (Ministry of Health), Department Of Bio Technology and Ministry of Environment and Forest, constituted on 24.8.2010, examined the environmental and health related concerns and has indicated that the most of the laboratory studies were unable to find a direct link between exposer to radio frequency radiation and health; and the scientific studies as yet have not been able to confirm a cause and effect relationship between radio frequency radiation and health..
 - (ii) Based on the recommendation of the IMC, norms for exposer limit for the radio frequency field (Base station emissions) have been made more stringent and reduced to 1/10th of the existing limits prescribed by the International Commission on Non Ionizing Radiation Protection(ICNIRP). Necessary direction has been issued to the Mobile Operators by DoT.
 - (iii) A committee constituting members from Indian Institute of Technology (IITs) Kharagpur, Kanpur, Delhi, Roorkee, Bombay and from other scientific institutions of the country including Indian Council of Medical Research (ICMR) and All India Institute of Medical Science (AIIMS) Delhi was formed. After due consideration of the human health concerns on account of EMF radiation being raised in public and the Report of the Committee, the Government has decided in February 2014 that the present prescribed precautionary EMF safe exposure limits are adequate and need no further change at this stage.

Making the norms ten times stricter than what has been prescribed by ICNIRP and recommended by WHO, obviates the need for having separate norm for special localities like schools, hospitals and residential areas. Further, Government of India has taken adequate steps to ensure that Telecommunications Service Providers strictly adhere to these prescribed norms.
