

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

**LOK SABHA
UNSTARRED QUESTION NO.2522
TO BE ANSWERED ON 30TH NOVEMBER, 2016**

EMF EMISSION FROM TOWERS

2522. SHRI ADHALRAO PATIL SHIVAJIRAO:
SHRI DUSHYANT CHAUTALA:
DR. PRITAM GOPINATH MUNDE:
SHRI NANA PATOLE:
DR. P. VENUGOPAL:
SHRI SHRIRANG APPA BARNE:
SHRI VINAYAK BHAURAO RAUT:
SHRI GUTHA SUKENDER REDDY:
SHRI Y.S. AVINASH REDDY:
SHRIMATI MEENAKASHI LEKHI:

Will the Minister of COMMUNICATIONS be pleased to state:

- (a) the details of studies conducted on the impact of mobile radiation on human beings and other living beings along with the outcome of such studies;
- (b) the permissible limit of Electromagnetic Field (EMF) emission from mobile towers and mobile handsets in the country *vis a vis* other developed countries;
- (c) whether telecom operators have been found violating the EMF emission norms and some the towers are found to be illegally set up;
- (d) if so, the details thereof and the action taken by the Government against the erring operators, operator-wise;
- (e) whether the mobile towers are emitting eight times higher radiation as compared to widely agreed global norms as per the study by a top institution; and
- (f) if so, the reaction of the Union Government thereon and the action taken by the Government to minimise the radiation emission from mobile towers and the mobile handsets to minimise the health risk?

ANSWER

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

(a) Madam, with regard to impact of Electromagnetic Field (EMF) emissions from mobile towers on health, World Health Organization (WHO) has referred to approximately 25,000 articles published around the world over past 30 years, and based on an in-depth review of scientific literature, has stated, "Despite the feeling of some people that more research needs to be done, scientific knowledge in this area is now more extensive than for most chemicals." WHO has concluded - "current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields".

An Inter-Ministerial Committee (IMC), setup in 2010 to examine the effect of Electro Magnetic Field (EMF) Radiation from base stations and mobile phones, after examining various national and international studies on the environmental and health related concerns due to EMF, had, inter-alia, indicated that most of the laboratory studies were unable to find a direct link between exposure to radio frequency radiation and health.

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(b) Based on the recommendations of IMC, Department of Telecommunications (DoT) had made the norms for exposure limit for the Radio Frequency Field (Base Station Emissions) ten times more stringent by reducing them to 1/10th of the existing limits prescribed by International Commission on Non Ionizing Radiation Protection (ICNIRP) and recommended by WHO. Presently the limits for EMF radiations from Base Station in India are as below:

Frequency Range	E-Field Strength (Volt/Meter)	H-Field Strength (Amp/Meter)	Power Density (Watt/Sq.Meter)
400MHz to 2000MHz	$0.434f^{1/2}$	$0.0011f^{1/2}$	$f/2000$
2GHz to 300GHz	19.29	0.05	1

(f = frequency in MHz)

Based on the recommendations of IMC, the Specific Absorption Rate (SAR) level for Mobile Handsets were also revised to 1.6 Watt per Kg averaged over a mass of one gram human tissue.

These limits were again reviewed in 2014 by a committee that was setup at the behest of Hon'ble High Court Allahabad, Lucknow bench. The Committee comprised of members from Indian Institutes 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. This Committee has also referred to various studies carried out in this regard and has observed that the Department of Telecom has taken adequate steps to impose stricter precautionary limits for EMF radiation from mobile towers as well as from mobile handset/phones.

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 decided in 2014 that the present prescribed precautionary EMF safe exposure limits were adequate and need no further change at this stage.

(c) & (d) As on 30.09.2016, 221 number of Base Transceiver Stations (BTSs) installed on various mobile towers have been found exceeding the prescribed EMF radiation limits. Telecom Service Provider(TSP) wise details of these BTSs is attached at **Annexure-I**. The details of financial penalty that has been imposed on defaulting TSPs as per the prescribed DoT guidelines for the non-compliant BTSs is also provided in **Annexure-I**.

(e) No. Out of 3,42,819 BTSs at mobile towers that have been inspected by Telecom Enforcement Resource & Monitoring (TERM) field units of DoT, only 221 have been found to exceed the prescribed EMF emission norms.

(f) EMF radiation norms from mobile towers in our country, which are below the safe limits prescribed by ICNIRP and recommended by WHO, have no convincing scientific evidence of causing adverse health effects. Department of Telecommunications has already prescribed stricter precautionary norms for exposure limit for EMF emissions from mobile tower and mobile handsets. Further, Government of India has laid down a procedure to ensure that Telecommunications Service Providers strictly adhere to the prescribed norms for mobile towers. All new BTS sites start radiating only after the certificate, that the BTS is compliant with prescribed EMF norms, has been submitted to relevant TERM Cells. In order to ensure compliance to the prescribed stricter precautionary norms of EMF radiation from mobile tower, the extensive audit of compliance of certificates, submitted by telecom service providers and BTS sites, is carried out by TERM field units of DoT. In case, any BTS site is found to violate the prescribed EMF norms, actions are taken to put a penalty of Rs. 10 lakh per BTS per incidence including closing of BTS site as per the prescribed procedure. Additionally, the BTS sites against which there are public complaints are also tested by TERM Cell.

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ANNEXURE - I

Lok Sabha Unstarred Question No. 2522 regarding "EMF Emissions from Towers" for 30.11.2016.

Number of Base Transceiver Stations (BTS) found exceeding prescribed EMF Norms and Penalty imposed.

Sl. No.	Telecom Service Provider	No. of BTS found exceeding prescribed EMF radiation limits (as on 30.09.2016)	Amount of penalty imposed on account of violation of radiation norms (as on 30.09.2016) in Rupees.
1	Aircel/Dishnet	15	90,00,000
2	Airtel/BHL	52	2,15,06,855
3	BSNL	8	70,00,000
4	Etisalat/Allianz	0	0
5	IDEA/ABTL/SPICE	17	95,06,855
6	Loop	11	55,00,000
7	MTNL	3	15,00,000
8	QTL/HFCL	0	0
9	Reliance	30	1,65,00,000
10	Reliance Jio	2	0
11	SSTL (MTS)	1	5,00,000
12	STEL	0	0
13	Tikona	0	0
14	TTSL/TTML/Tata	30	1,45,13,709
15	Videocon	2	10,00,000
16	Vodafone	43	1,80,06,855
17	Telenor/Telewings/Uninor	7	35,00,000
18	Augere	0	0
	Grand Total	221	10,80,34,274
