

**Electromagnetic Field Emission (EMF) Safety Monitoring  
(February & March, 2021, Thimphu)**

The Authority is pleased to inform the general public that for the safety from EMF radiation emitting from Mobile BTS station, the Authority is carrying out periodic EMF radiation measurement monitoring.

Recently on 18th-19th February and 4th-5th March 2021, various BTS stations in Thimphu urban areas were tested and monitored by the Authority. The measurement testing was carried out from the location which directly faced the sector antenna, positioning the testing equipment facing directly to the BTS sector antenna. The minimum distance of measurement testing (between sector antenna and testing equipment) was in the range of 6 meters to 20 meters.

It was found that the EMF maximum exposure level from the monitored BTS stations are lower than the benchmark standard and thus safe. The benchmark standard according to the maximum exposure level standardized by the International Commission on Non-ionizing Radiation Protection (ICNIRP) is as shown in the table below:

**Table: Reference levels for electric and magnetic fields for occupational and general public exposure in Bhutan**

<b>Frequency range</b>	<b>Electric field-strength (V/m)</b>		<b>Equivalent plane wave power-density <math>S_{eq}</math> (W/m<sup>2</sup>)</b>	
	<b>general public</b>	<b>occupational</b>	<b>General public</b>	<b>Occupational</b>
0.1 - 30 Hz	$300/(10^{0.5 * f^{0.7}} \text{ MHz})$	$600/(10^{0.5 * f^{0.7}} \text{ MHz})$	NA	NA
>30 – 400 MHz	$27.7/10^{0.5}$	$61/10^{0.5}$	0.2	1
>400 - 2000 MHz	$(1.375^{f^{0.5}} \text{ (MHz)})/10^{0.5}$	$(3^{f^{0.5}} \text{ (MHz)})/10^{0.5}$	$(f/2000)$	$(f/400)$
>2 - 300 GHz	NA	NA	1	5

Since July 2018, the Authority has started to monitor and measure the EMF radiation level of BTS stations (towers) in the country and has certified EMF compliance to 357 BTS towers in the country mainly falling in urban areas and satellite towns of following Dzongkhags:

- Thimphu
- Chukha
- Paro
- Punakha
- Wangdue
- Sarpang
- Samtse
- Gasa
- Tsirang
- Dagana
- Trongsa
- Bumthang
- Mongar
- Trashigang
- Trashiyangtse

The Authority will continue to monitor and measure all the remaining mobile towers in the country and will be issued with the certificate of EMF threshold compliance.