

NSW FACT SHEET – RADIO FREQUENCY RADIATION

1. WHAT ARE RADIO FREQUENCY RADIATION (RFR) AND ELECTRO-MAGNETIC ENERGY?

RFR or EME is a form of non-ionizing radiation which has been in use for more than 100 years. It is used to send and receive signals between communications equipment e.g. broadcast towers, radios/TV, mobile phone towers, electrical equipment etc. and is also part of our natural environment.

2. EXPOSURE TO RFR AND EME?

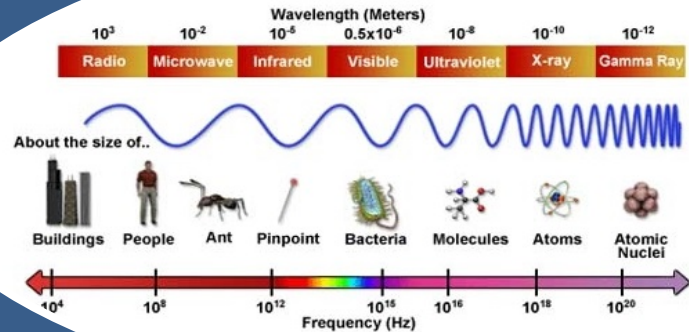
Most RFR fields found in the environment are from commercial radio/TV broadcasting and telecommunications facilities. RFR sources in the home include microwave ovens, mobile phones, wireless networks, remote controls etc. Measurement surveys in Australia have shown that exposure to RFR is usually many orders of magnitude below the limit of $450 \mu\text{W}/\text{cm}^2$ set by the ARPANSA Radiation Protection Standard.

3. POSSIBLE EFFECTS OF RFR OR EME EXPOSURE

RFR heats biological tissue, similar to a microwave, if you absorb too much heat, your body may not be able to disperse it. Possible effects are likened to those of physical activity (sweating, increase in body temperature) and eventually heat stress (headache, dizziness, nausea). Extreme levels that cause this kind of heating are not ordinarily encountered by the general public.

4. HOW IS RFR AND EME REGULATED?

Two Australian Government agencies, the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and the Australian Communications and Media Authority (ACMA), are responsible for regulating RFR exposure.



Compliance requirements of RFR are outlined in the *NSW Radiation Control Act 1990* and *NSW Radiation Control Regulation* which is to be read in conjunction with the *NSW Work Health and Safety Act 2011*.

5. RFR WARNING SIGNS AND ACCESS LIMITS

Signs must be in place to identify areas with above standard exposure limits. Typically, the hazard areas extend only a short distance from antennas and the only way a transmitting facility can be non-compliant with the Radiation Protection Standard is if these areas are accessible to the public. For this reason, public access to antennas where RFR fields may exceed exposure limits is restricted. RFR workers must be trained in safe work practices and supervised when required.



6. INFORMATION SOURCES

- *Radiation Control Act 1990, Radiation Control Regulation 2013*, visit www.legislation.nsw.gov.au or www.epa.nsw.gov.au
- *Radiation Protection Standard - Maximum Exposure Levels to Radio Frequency Fields -kHz to 300 GHz (2002)*, visit www.arpansa.gov.au
 - Email us: info@propertyrisk.com.au