

Mobile phone base stations and EME

Joint statement by the ACMA and ARPANSA

The [Australian Communications and Media Authority \(ACMA\)](#) and the [Australian Radiation Protection and Nuclear Safety Agency \(ARPANSA\)](#) are committed to providing clear information about their respective responsibilities in the regulation of radiofrequency electromagnetic energy (RF EME). RF EME is emitted by telecommunications equipment such as smart meters, Wi-Fi devices and base stations.

Based on an assessment of relevant scientific research and international guidance, ARPANSA sets the human exposure limits for RF EME emitted by telecommunications equipment. To make sure RF EME exposure from equipment is kept low, the ACMA then applies the ARPANSA EME exposure limits to consumer devices and telecommunications facilities.

This joint statement about mobile phone base stations is one of a series discussing RF EME from telecommunications equipment.

What are mobile phone base stations?

Mobile phone base stations are part of the mobile telephone network and communicate using low level radio waves, or RF EME. A mobile phone network is made up of base stations operating in conjunction with adjacent base stations to provide service to end-users moving from place to place within a coverage area. Mobile phone base stations must be carefully located in relation to each other, to ensure that the network operates efficiently and end-users are provided with good coverage.

How is EME from mobile phone base stations regulated?

The ACMA and ARPANSA have distinct but complementary roles in RF EME regulation.

As the government's primary authority on radiation protection and nuclear safety, ARPANSA assesses relevant scientific research and provides expert advice on EME. It uses this information to set a framework for protecting the Australian public from harmful effects of radiation, including the RF EME emitted by mobile phone base stations and other telecommunications facilities.

As part of this protection, ARPANSA sets the RF EME human exposure limits within Australia. These are published in the [Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz \(2002\)](#) (known as the ARPANSA Standard). The exposure limits in the ARPANSA Standard are only enforceable if they are referenced in other regulatory arrangements.

The ACMA is Australia's communications regulator. Mobile phone base stations must comply with the licence conditions imposed through the ACMA's [Radiocommunications Licence Conditions \(Apparatus Licence\) Determination 2015](#) (Apparatus LCD). This regulation requires mobile phone base stations to comply with the public exposure limits specified in the ARPANSA Standard.

In addition, telecommunications carriers are responsible for identifying mobile phone base station locations and undertaking community consultation under the [Industry Code C564:2011 Mobile Phone Base Station Deployment](#).

Do mobile phone base stations cause health effects?

Measurement surveys have shown that exposure to RF EME in the environment from various sources is very low and typically much lower than the allowable limit for safety in the ARPANSA Standard.

ARPANSA and the World Health Organization have assessed the scientific evidence on RF EME exposure from base stations and health, and concluded that there are no established health effects at levels below the exposure limits specified in the ARPANSA Standard.

Through its EME base station compliance program, the ACMA has found a high level of compliance with EME licence conditions. The maximum levels of exposure of RF EME from base stations also may be calculated from details of the equipment installed. These calculations are made available in the ARPANSA EME reports provided by the telecommunications companies on the [Radio Frequency National Site Archive](#). EME exposure to the public from base stations is **significantly below** the limits of the ARPANSA Standard.

Where can I get more information?

- > The installation of mobile phone base stations that are not low impact facilities is subject to State, Territory and local government planning law. Telecommunications carriers are responsible for the installation of mobile phone base stations and for compliance with all regulatory obligations, so contact the relevant telecommunications carrier or local government if you have concerns about a mobile phone base station installation.
- > The [ARPANSA website](#)
- > The ACMA's [EME consumer hub](#)