



# COMMUNICATIONS TOWERS, RADIO TRANSMITTERS AND SAFETY

Information for communities and their parliamentary representatives

## Radio transmitters—Are they safe?

Some people may have concerns about possible health effects from exposure to electromagnetic energy (EME) coming from radiocommunications transmitters on towers and elsewhere. This factsheet outlines the steps the Australian Government takes to keep Australians safe.

Exposure to radiofrequency (RF) EME has been the subject of detailed research by experts. Exposure limits are set well below the level at which adverse health effects are known to occur and include a wide safety margin to protect the public.

## What is EME?

RF EME is the energy in radio waves, and is used for wireless communication. It has been in use for over 100 years. It is used to send and receive signals between communications equipment such as broadcast towers, radios and televisions, mobile phone towers and phones, radar facilities, and electrical and electronic equipment. It is also part of our natural environment.

## How is 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 RF EME exposure.

ARPANSA is an independent Australian Government agency charged with protecting Australians from exposure to EME. ARPANSA is responsible for advising what safe levels of EME exposure are. ARPANSA has developed a public health standard which sets limits for human exposure to RF EME. The limits are set well below the level at which adverse health effects are known to occur and include a wide safety margin to protect the public. The exposure standards take into account the many sources of RF EME present in the modern environment.

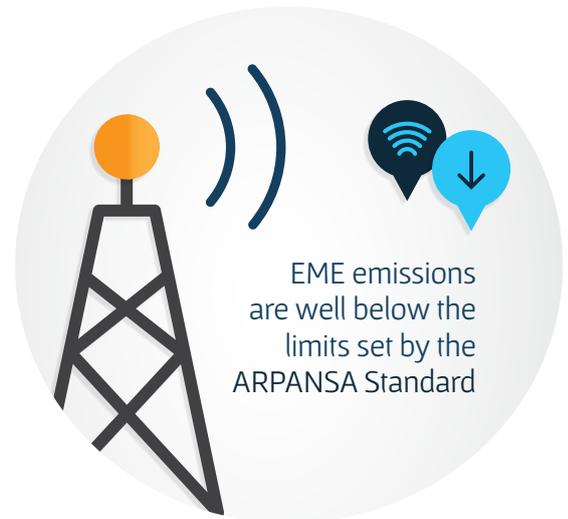
The ACMA licenses the operation of radiocommunications transmitters. Licences require transmitters to comply with the exposure limits set out in the ARPANSA standard.

## How much EME comes from radio transmitters?

All transmitters must operate below ARPANSA's public exposure standard. Typically transmitters operate at a tiny percentage of the ARPANSA standard.

## Is the scientific information on EME up to date?

ARPANSA maintains continual oversight of emerging research into the potential health effects of EME exposure in order to provide accurate and up-to-date advice to the Government. ARPANSA works with the World Health Organisation in researching the health effects of human exposure to EME. Should scientific evidence indicate that the current ARPANSA standard does not adequately protect the health of Australians, the Government would take immediate action to rectify the situation.



## NBN wireless towers

Currently, as part of the rollout of the National Broadband Network (NBN), a number of new fixed wireless towers are being built across Australia. These are subject to the same strict EME safety limits set by ARPANSA. As such, exposure to EME should not be a concern.

People can, however, also be concerned about the appearance of towers and their visual impact in their communities. This can also be the case with other facilities, for example mobile phone base stations. Approvals for the installation of free standing telecommunications towers are subject to state, territory and local government planning laws. NBN Co is required to follow the processes for community and local government consultations set out in these laws. People with concerns about proposed NBN towers should raise their concerns during the consultation process for each tower.

## Where can I find out more information?

Further information is available from the following expert bodies:

### **Australian Radiation Protection and Nuclear Safety Agency**

[www.arpansa.gov.au](http://www.arpansa.gov.au)

### **Australian Communications and Media Authority**

[www.acma.gov.au/Citizen/Consumer-info/Rights-and-safeguards/EME-hub](http://www.acma.gov.au/Citizen/Consumer-info/Rights-and-safeguards/EME-hub)

### **World Health Organisation**

[www.who.int/topics/electromagnetic\\_fields](http://www.who.int/topics/electromagnetic_fields)

### **International Commission on Non-Ionising Radiation Protection (ICNIRP)**

[www.icnirp.org](http://www.icnirp.org)

You can also find out more about transmitters in your community, including EME reports and community consultation information, from the Radio Frequency National Site Archive

[www.rfnsa.com.au](http://www.rfnsa.com.au)