

## Electrical Safety & Electromagnetic Fields (EMF)

Electromagnetic fields (EMF) are a type of energy that is all around us, although we can't see or feel it. EMFs are caused by the electricity and electronic devices that we all use every single day. When we use electricity and electronic devices, they create and emit electronic and magnetic fields.

ARPANSA is the Australian Government agency responsible for research, policy and best practice regulation relating to Electro Magnetic Fields (EMF). ARPANSA prepares and publishes guidelines for EMF exposure to ensure community safety and the safety of electricity industry staff who work at much closer distances. Based on their research and guidance, there is no scientific evidence to suggest that exposure to EMFs around the home, office or near powerlines causes health effects.

We have been using electricity in Australia for more than 100 years. Over that period of time, there has been a vast amount of research carried out on EMF. Beyond Australian shores, there have been thousands of international studies carried out in relation to EMF. These studies have significantly improved and will continue to increase our knowledge and understanding of EMF. The World Health Organisation and other leading global health bodies continue to evaluate research into health effects associated with exposure to EMF. Exposure to electromagnetic fields (EMF) commonly present in residential areas, offices, or near powerlines and other electrical sources is not scientifically proven to pose a threat to human health.

RES is committed to working closely with landholders, the community and other stakeholders with an interest in EMF by:

- Working with host landholders and communities to locate proposed BESS infrastructure and distribution and/or transmission infrastructure away from houses so they do not materially add to EMF levels that already exist in a typical household environment.
- Work with other electricity entities to ensure connections are designed such that EMF from the proposal are reduced in accordance with best practice outlined in the ENA EMF Management Handbook (which can be viewed at the first reference below).

### References:

*Energy Networks Association ([energynetworks.com.au/resources/fact-sheets/emf-management-handbook/](http://energynetworks.com.au/resources/fact-sheets/emf-management-handbook/))*

*Australian Radiation Protection and Nuclear Safety Agency (<https://www.arpansa.gov.au/understanding-radiation/radiation-sources/more-radiation-sources/electricity>)*

*World Health Organisation (<https://protect-eu.mimecast.com/s/KMKnCwk9JFADIG2cKtco7?domain=who.int>)*

The graphic below represents average EMF levels in everyday places.

### Magnetic field levels at different locations

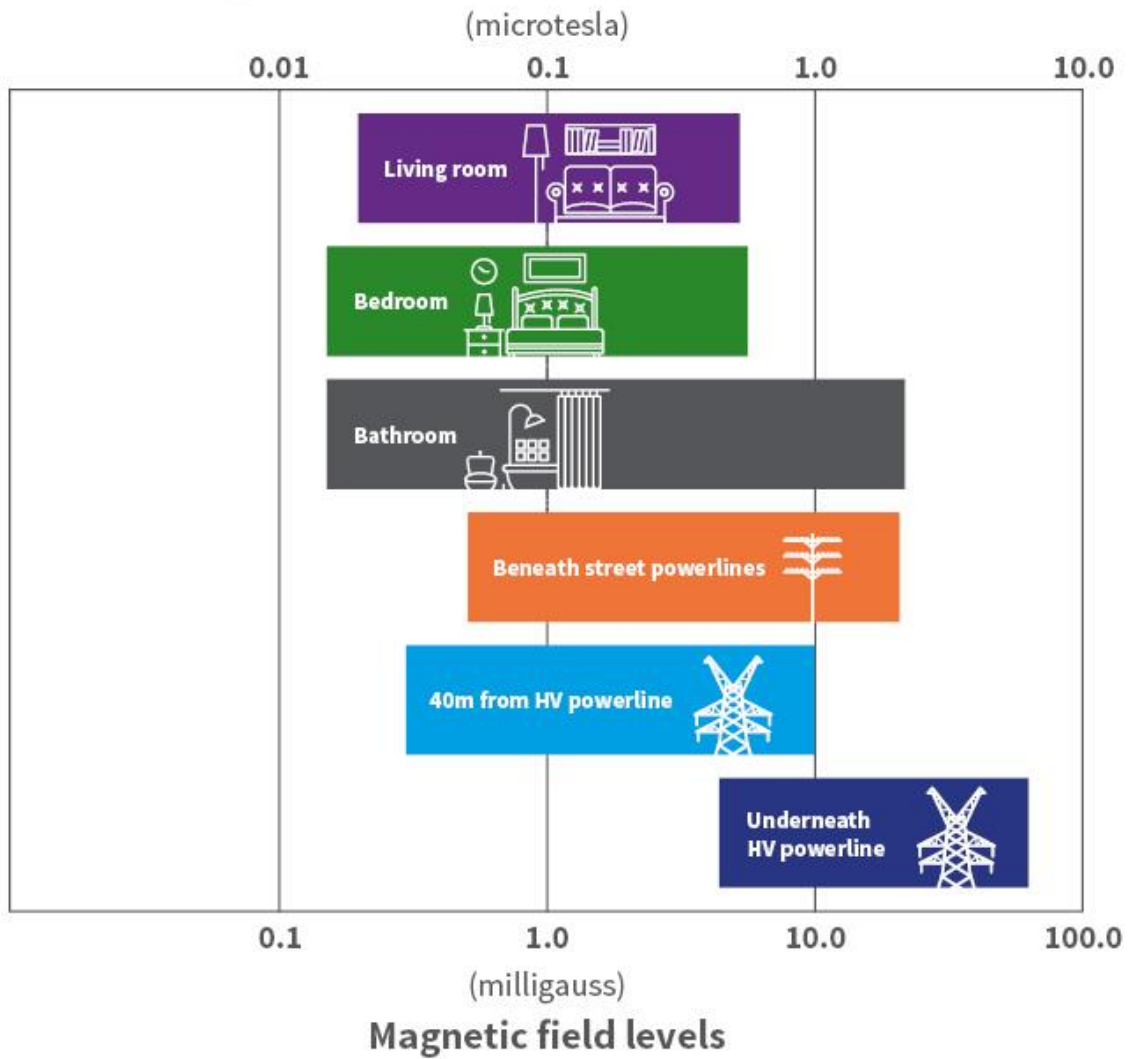


Image source: Australian Radiation Protection and Nuclear Safety Agency  
<https://www.arpana.gov.au/understanding-radiation/radiation-sources/more-radiation-sources/electricity>