

2024 TELECOMMUNICATIONS REVIEW SUBMISSION

1. What initiatives or tools could be implemented by the telecommunications industry or the Australian Government to improve connectivity literacy and make it easier for regional consumers and businesses to understand their connectivity options and help them to choose affordable services that meet their needs?

Don't confuse people with too many options. Use videos and flyers to explain in simple language. It is most important to use safe technology, currently the wireless connections are emitting harmful radiation, that should be made known to the public.

It is the responsibility of the telecommunication industry and the Australian Government to be aware that there are many independent studies showing that the wireless technology is emitting harmful radiation and effecting the human body and this needs to be addressed and not ignored. Watch:

Wireless wake-up call | Jeromy Johnson | TEDxBerkeley

<https://www.youtube.com/watch?v=F0NEaPTu9oI>

2. What further initiatives can be implemented to support First Nations communities in developing and leading their own digital inclusion solutions while ensuring cultural appropriateness?

Keeping First Nations engaged and involving them in the decision making with regards to how this effects their community. Transparency is crucial and discussions of how electromagnetic radiation can effect their health, the animals and the environment and not selling only the positive aspects of 'digital technology' without presenting the harm it can potentially introduce to their community, their health, their children's health etc.

What about an investigative study of how many mysterious health symptoms are being experienced by the community? Is it possibly related to the increase in electromagnetic radiation introduced to the community?

3. How can government and industry address any misleading and inaccurate information surrounding telecommunications services in regional, rural and remote areas, to ensure consumers and businesses have access to reliable and unbiased information when making decisions about their connectivity options?

Firstly the telecommunication industry should be fully aware that when more people start to recognise the harm that wireless technology is causing them and they have not been made aware but instead told it is perfectly safe by authorities who should know better and who make decisions on behalf of the community that they be warned that in future if evidence becomes indisputable they will be held accountable and liable for the harms caused.

Currently the Australian government and telco companies are ignoring the independent studies and are becoming the primary source of misinformation relying on outdated studies, assumptions based on studies on dummies for testing safety standards and relying on organisations funded by industry interested parties with self interest to provide safety information. This is alarming and needs addressing. Check this site out:

<https://www.wearenotsam.com/>

4. Deploying and maintaining telecommunications infrastructure in remote areas requires a skilled workforce. What initiatives can be implemented to ensure there is a skilled workforce in regional and remote Australia capable of supporting the construction, maintenance and operation of futureproof telecommunications infrastructure?

Educate workforce on safe technology so they know the difference. The benefits of optical fibre and hardwired technology over microwave antenna infrastructure. This should be where the future should be, all about safe digital technology and not technology that is detrimental to the health of biological species.

5. Could the NBN fixed wireless network or other alternative networks be used to provide reliable and affordable voice services in remote areas? Are there any consumer safeguards or guarantees that need to remain or be changed under reformed universal service arrangements.

Advocate for energy efficient and safe fibre optic cable hardwired technology. Consumer guarantees should revolve around safe and harmless networks that are reliable and affordable, they do exist!

Dr. Magda Havas: The Truth About Wired and Wireless Technologies

<https://www.youtube.com/watch?v=dYjAAqUfHtE>

6. In modernising universal service arrangements, should access to public phone infrastructure continue and are there particular areas of need? Could technologies beyond traditional payphones be explored to meet this need?

Yes, by all means they should continue. Free pay phones are an essential service more so in the remote and regional areas, these phones could easily be connected without cell tower infrastructure and reliance on wireless technology. That is no need to change what doesn't need to be altered.

<https://www.sbs.com.au/news/article/how-free-public-payphones-are-proving-to-be-a-lifeline-for-thousands-of-australians/a5vhrdebo>

6. What should the minimum internet speed guarantee be (currently a peak speed of 25/5 Mbps) to meet modern needs? Should minimum data download/upload allowances be regulated? What other factors are important, like latency, reliability and affordability?

The most important consideration is safety. Fibre optic cable is safe and reliable and does the job. There is no need to introduce technology with potential harm, risks and also risks of liability from those who could be held accountable for harms caused.

<https://www.theguardian.com/technology/2018/oct/24/twisted-fibre-optic-light-breakthrough-could-make-internet-100-times-faster>

MOBILE

7. How can we achieve equity with respect to mobile services (voice, data and SMS) in regional, rural and remote communities and on regional and remote roads?

Using safe hard wired technology and infrastructure as opposed to microwaves and reliance and dependence on wireless technology.

8. How can we ensure regional, rural and remote areas have access to the networks, equipment and capacity they need for improved household connectivity and to foster innovation and efficiency across regional industries, including for IoT applications?

Again safety first, proven and safe fibre optic cables over microwave wireless technology.

9. The cost of building and maintaining telecommunications infrastructure in rural and remote areas can be a barrier to offering better services. What can be done to improve the fixed broadband options available to regional, rural and remote Australians?

That's exactly the point, the wireless roll out is causing increased costs and unnecessary expense due to requiring towers everywhere. Ditch wireless over safer technology and more money can be spent for worthwhile changes and improvements in rural and regional areas.

11. Have you had experience with new or alternate service providers such as Starlink or WISPs? If not, why not? What additional measures would persuade you to consider new technologies?

No, but satellite technology is also questionable when it comes to electromagnetic radiation and health risks. New technologies need to be tested for safety before widespread use.

Disaster resilience and emergency

12. What can be done to maximise access to multiple connectivity options in case of outages?

Precisely where wireless technology is unreliable when weather situations, storms, fires etc can render services to halt. Fibre optic cable installed underground is more reliable for emergency situations.

13. What can be done to increase capacity and improve the reliability of telecommunications services in regional, rural and remote Australia?

Consider safer technologies and not dependence on wireless technology solely for communication services etc.

Q14-19 will generate similar answers.

20. What other matters should the Committee consider in its review and why are they important?

Safety and health should be paramount. The future planning of wireless technology is heading towards a detrimental mass health crisis for all beings on this planet. The committee needs to start reviewing other sources to determine their conclusions regarding safety and not rely solely on ARPANSA and ICNIRP guidelines only.

Source: <https://www.saferemr.com/2016/08/key-cell-phone-radiation-research.html>

Tumor risk review

Myung et al (2009) Mobile phone use and risk of tumors: a meta-analysis. *J Clinical Oncology*. <http://bit.ly/2F0ldUS>

Khurana et al (2009) Cell phones and brain tumors: a review including long-term epidemiologic data. *Surgical Neurology*. <http://bit.ly/2WTQwfk>

Levis et al (2011) Mobile phones and head tumours: the discrepancies in cause-effect relationships in the epi studies-how do they arise. *Environ Health*. <http://bit.ly/2IsQy4r>

Levis et al (2012) Mobile phones and head tumours: a critical analysis of case-control epi studies. *Open Environ Sciences*. <http://bit.ly/2EXT5ml>

WHO (2013) IARC monographs on the evaluation of carcinogenic risks to humans. Volume 102: Non-ionizing radiation, Part 2: Radiofrequency electromagnetic fields. <http://bit.ly/10oIE3o>

Morgan et al (2015) Mobile phone radiation causes brain tumors and should be classified as a probable human carcinogen (2A) (Review). *Int J Oncology*. <http://bit.ly/2XwgVNa>

Wang & Guo (2016) Meta-analysis of association between mobile phone use and glioma risk. *J Cancer Research Therapy* <http://bit.ly/2o1dVcn>

Bortkiewicz et al (2017) Mobile phone use and risk of intracranial tumors and salivary gland tumors - A meta-analysis. *Int J Occ Med Envir Health*. <http://bit.ly/2nVJC5d>

Prasad et al (2017) Mobile phone use and risk of brain tumours: a systematic review of association between study quality, source of funding, and research outcomes. *Neurol Sci*. <http://bit.ly/2Xxp83P>

Carlberg, Hardell (2017) Evaluation of mobile phone and cordless phone use and glioma risk using the Bradford Hill viewpoints from 1965 on association or causation. *Biomed Res Int*. <http://bit.ly/2WwBX1K>

Miller, et al (2018). Cancer epidemiology update, following the 2011 IARC evaluation of radiofrequency electromagnetic fields (Monograph 102). *Environ Res*. <http://bit.ly/2rJD7Fu>

Choi, Moskowitz, et al (2020). Cellular phone use and risk of tumors: Systematic review and meta-analysis. *Int J Envir Res Public Health*. <https://doi.org/10.3390/ijerph17218079>.

Also see [Long-Term Cell Phone Use Increases Brain Tumor Risk](#)

Tumor risk studies

Interphone Study Group (2010) Brain tumour risk in relation to mobile phone use: results of the Interphone international case-control study. *Int J Epidemiol.* <http://bit.ly/2MzsceR>

Interphone Study Group (2011) Acoustic neuroma risk in relation to mobile telephone use: results of the INTERPHONE international case-control study. *Cancer Epidemiol.* <http://bit.ly/2Ix7BIQ>

Aydin et al (2011) Mobile phone use & brain tumors in children & adolescents: a multi-center case-control study. (CEFALO Study). *JNCI.* <http://bit.ly/31j0JBa>

Hardell et al (2013) Case-control study of the association between malignant brain tumours diagnosed between 2007 and 2009 and mobile and cordless phone use. *Int J Oncology.* <http://bit.ly/2ZaVJq5>

Hardell et al (2013) Pooled analysis of case-control studies on acoustic neuroma diagnosed 1997-2003 and 2007-2009 and use of mobile and cordless phones. *Int J Oncology.* <http://bit.ly/31qbDaO>

Coureau et al (2014) Mobile phone use and brain tumours in the CERENAT case-control study. *Occup Envi Med.* <http://bit.ly/1DWqzRi>

Grell et al (2016) The intracranial distribution of gliomas in relation to exposure from mobile phones: Analyses from the INTERPHONE Study. *Am J Epidemiol.* <http://bit.ly/2ZcawHu>

Also see: [Acoustic neuroma risk and cell phone use studies](#) and [Should Cellphones Have Warning Labels?](#)

Breast cancer

West et al (2013) Multifocal breast cancer in young women with prolonged contact between their breasts and their cellular phones. *Case Rep Med.* <http://bit.ly/2WW8n52>

Shih et al (2020) The association between smartphone use and breast cancer risk among Taiwanese women: A case-control study. *Cancer Manag Res.* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7605549/>

Brain tumor incidence trends

Inskip et al (2010) Brain cancer incidence trends in relation to cellular telephone use in the United States. *Neuro Oncology.* <http://bit.ly/2K6rEuz>

Zada et al (2012) Incidence trends in the anatomic location of primary malignant brain tumors in the United States: 1992-2006. *World Neurosurg.* <http://bit.ly/2Wq1Dbm>

Hardell & Carlberg (2015) Increasing rates of brain tumours in the Swedish National Inpatient Register & the Causes of Death Register. *Int J Envir Res Public Health.* <http://bit.ly/1aDHJm>

Devocht (2016) Inferring the 1985–2014 impact of mobile phone use on selected brain cancer subtypes using Bayesian structural time series and synthetic controls. *Environ Int.* <http://bit.ly/2jJlbZu> corrigendum (2017): <http://bit.ly/2Cuq2nU>

Hardell & Carlberg (2017) Mobile phones, cordless phones and rates of brain tumors in different age groups in the Swedish National Inpatient Register and the Swedish Cancer Register during 1998-2015. *PLOS One.* <http://bit.ly/H-C2017>

Philips et al (2018) Brain tumours: Rise in Glioblastoma Multiforme incidence in England 1995-2015 suggests an adverse environmental or lifestyle factor. *J Environ Public Health.* <http://bit.ly/2KIY4al>

Also see: [Brain Tumor Rates Are Rising in the US: The Role of Cell Phone & Cordless Phone Use](#)

Mechanisms

Ruediger (2009) Genotoxic effects of radiofrequency electromagnetic fields. *Pathophysiology.* <http://bit.ly/2EXGaRb>

Behari (2010) Biological responses of mobile phone frequency exposure. *Indian J Exp Biology.* <http://bit.ly/2Xx0Gzr>

Giuliani and Soffritti (2010). Nonthermal effects and mechanisms of interaction between electromagnetic fields and living matter. ICEMS Monograph. Ramazzini Institute. 403 pp. <http://bit.ly/2HUnO7R>

Juutilainen et al (2011) Review of possible modulation-dependent biological effects of radiofrequency fields. *Bioelectromagnetics*. <http://bit.ly/2MAQ7KJ>

Volkow et al (2011) Effects of cell phone radiofrequency signal exposure on brain glucose metabolism. *JAMA*. <http://bit.ly/2KvjIBT>

Pall (2013) EMFs act via activation of voltage-gated calcium channels to produce beneficial or adverse effects. *J Cell Mol Med*. <http://bit.ly/2K5yO2e>

Calderon et al (2014) Assessment of extremely low frequency magnetic field exposure from GSM mobile phones. *Bioelectromagnetics*. <http://bit.ly/2EA1N7e>

Dasdag & Akdag (2015) The link between radiofrequencies emitted from wireless technologies & oxidative stress. *J Chem Neuroanat*. <http://bit.ly/2EXN88W>

Yakymenko et al (2016) Oxidative mechanisms of biological activity of low-intensity radiofrequency radiation. *Electromagnet Biol Med*. <http://bit.ly/2qCGM4F>

Barnes & Greenenbaum (2016) Some effects of weak magnetic fields on biological systems: RF fields can change radical concentrations and cancer cell growth rates. *IEEE Power Electronics J*. <http://bit.ly/1WvQGiY>

Tamrin et al (2016) Electromagnetic fields and stem cell fate: When physics meets biology. *Rev Physiol Biochem Pharmacol*. <http://bit.ly/2b6Ht3y>

Terzi et al (2016) The role of electromagnetic fields in neurological disorders. *J Chem Neuroanat*. <https://bit.ly/3i9if6b>

Havas (2017) When theory and observation collide: Can non-ionizing radiation cause cancer? *Environ Pollution*. <http://bit.ly/2DssMS2>

Barnes & Kandala (2018) Effects of time delays on biological feedback systems and electromagnetic field exposures. *Bioelectromagnetics*. <http://bit.ly/2EZkZPS>

Belpomme et al (2018) Thermal and non-thermal health effects of low intensity non-ionizing radiation: An international perspective. *Environ Pollution*. <http://bit.ly/IntIEMFreview>

Hinrikus et al (2018) Understanding physical mechanism of low-level microwave radiation effect. *Int J Radiation Biol*. <http://bit.ly/2EwNyoU>

Mortazavi et al (2019) Evaluation of the validity of a nonlinear J-shaped dose-response relationship in cancers induced by exposure to radiofrequency electromagnetic fields. *J Biomed Phys Eng*. <http://bit.ly/37FIDxP>

Nielsen et al (2019) Towards predicting intracellular radiofrequency radiation effects. *PLOS One*. <http://bit.ly/2uaeFXY>

Panagopoulos (2019) Comparing DNA damage induced by mobile telephony and other types of man-made electromagnetic fields. *Mutation Res*. <http://bit.ly/2HAC11O>

Halgamuge et al (2020) A meta-analysis of in vitro exposures to weak radiofrequency radiation exposure from mobile phones (1990–2015). *Envir Res*. <https://doi.org/10.1016/j.envres.2020.109227>.

Bertagna et al (2021) Effects of electromagnetic fields on neuronal ion channels: a systematic review. *Annals of the New York Academy of Sciences*. <https://bit.ly/2R3TigS>

Panagopoulos et al (2021) Human-made electromagnetic fields: Ion forced-oscillation and voltage-gated ion channel dysfunction, oxidative stress and DNA damage (Review). *Int J Oncol*. <https://www.spandidos-publications.com/ijo/59/5/92>

Lai H, Levitt B. (2023) Cellular and molecular effects of non-ionizing electromagnetic fields. *Reviews on Environmental Health*. <https://doi.org/10.1515/reveh-2023-0023>

Reproductive Health Effects

LaVignera et al (2011) Effects of the exposure to mobile phones on male reproduction: a review of the literature. *J Andrology*. <http://bit.ly/2wL7zRO>

Aldad et al (2012) Fetal radiofrequency radiation exposure from 800-1900 Mhz-rated cellular telephones affects neurodevelopment and behavior in mice. *Science Reports*. <http://bit.ly/2Z6H45I>

Divan et al (2012) Cell phone use and behavioural problems in young children. *J Epidemiol Commun Health*. <http://bit.ly/2EV1bw8>

Adams et al (2014) Effect of mobile telephones on sperm quality: A systematic review and meta-analysis. *Reproduction*. <http://bit.ly/1pUnmDq>

Houston et al (2016) The effects of radiofrequency electromagnetic radiation on sperm function. *Reproduction*. <http://bit.ly/2cJJ2pE>

Kim et al (2021) Effects of mobile phone usage on sperm quality – No time-dependent relationship on usage: A systematic review and updated meta-analysis. *Environ Research*. <https://bit.ly/3squ2>

Kaur et al (2023) Genotoxic risks to male reproductive health from radiofrequency radiation. *Cells*. <https://bit.ly/3PbblaU>

Also see: [Effect of Mobile Phones on Sperm Quality](#) and [Pregnancy & Wireless Radiation Risks](#)

Electromagnetic Hypersensitivity

See: [Electromagnetic Hypersensitivity](#)

Exposure

Kelsh et al (2010) Measured radiofrequency exposure during various mobile-phone use scenarios. *J Exposure Sci Environ Epidemiol*. <http://bit.ly/2luYH8s>

Gandhi et al (2012) Exposure limits: the underestimation of absorbed cell phone radiation, especially in children. *Electromagnetic Biol Med*. <http://bit.ly/2EZilbN>

International EMF Scientist Appeal (2015). <https://emfscientist.org/>

International Appeal: Scientists call for protection from non-ionizing electromagnetic field exposure. *European J Oncology*. 20(3/4). 2015. <http://bit.ly/EMFAppealEurOncol>

Schmid & Kuster (2015) The discrepancy between maximum in vitro exposure levels and realistic conservative exposure levels of mobile phones operating at 900/1800 MHz. *Bioelectromagnetics*. <http://bit.ly/31j46be>

Sagar et al (2018) Comparison of radiofrequency electromagnetic field exposure levels in different everyday microenvironments in an international context. *Environ Intl*. <http://bit.ly/2E5QR10>

Gandhi OP (2019) Microwave emissions from cell phones exceed safety limits in Europe and the US when touching the body. *IEEE Access*. <http://bit.ly/2QUTI4N>

Wall et al (2019) Real-world cell phone radiofrequency electromagnetic field exposures. *Environ Research*. <https://bit.ly/CDPHphone>

Calderón et al (2022) Estimation of RF and ELF dose by anatomical location in the brain from wireless phones in the MOBI-Kids study. *Environ Intl*. <https://bit.ly/3Or2x3F>

Lai H, Levitt BB (2022). The roles of intensity, exposure duration, and modulation on the biological effects of radiofrequency radiation and exposure guidelines. *Electromagnetic Biol Med*. <https://bit.ly/RFLaiLevitt2022>

ICBE-EMF (2022). Scientific evidence invalidates health assumptions underlying the FCC and ICNIRP exposure limit determinations for radiofrequency radiation: implications for 5G. *Environ Health*. <https://bit.ly/ICBE-EMFpaper1>

Lin J (2023). Incongruities in recently revised radiofrequency exposure guidelines and standards. *Environ Research*. <https://bit.ly/3lijiUP>

Miclaus et al (2023). An Exposimetric Electromagnetic Comparison of Mobile Phone Emissions: 5G versus 4G Signals Analyses by Means of Statistics and Convolutional Neural Networks Classification. *Technologies*. <https://bit.ly/3ParNO5>

Genetic Effects

Lai H (2021) Genetic effects of non-ionizing electromagnetic fields. *Electromagnetic Biol Med*. <https://www.tandfonline.com/doi/abs/10.1080/15368378.2021.1881866>

Blood-Brain Barrier Studies

[AirPods: Are Apple's New Wireless Earbuds Safe? \(Blood-Brain Barrier Effects\)](#)

5G and Millimeter Wave Studies

[5G Wireless Technology: Is 5G Harmful to Our Health?](#)

[5G Wireless Technology: Millimeter Wave Health Effects](#)

Other

Huss et al (2007) Source of funding and results of studies of health effects of mobile phone use: systematic review of experimental studies. *Environ Health Perspec*. <http://bit.ly/2wBEmYp>

Fragopoulou et al (2010) Scientific panel on electromagnetic field health risks: consensus points, recommendations, and rationales. *Rev Environ Health*. <http://bit.ly/2tWiXHP>

Alster, N (2015) *Captured agency: How the FCC is dominated by the industries it presumably regulates*. Harvard University. <http://bit.ly/FCCcaptured>

Consumer Reports (2015) "Does cell-phone radiation cause cancer?" <http://bit.ly/CRoncellphoneradiation>

Kostoff R, Lau C (2017). Modified health effects of non-ionizing electromagnetic radiation combined with other agents reported in the biomedical literature. In C.D. Geddes (ed.), *Microwave Effects on DNA and Proteins*. <http://b.gatech.edu/2uyMAz0>

Bandara P, Carpenter DO (2018). Planetary electromagnetic pollution: it is time to assess its impact. *The Lancet Planetary Health*. <http://bit.ly/2GqpJQF>

Foerster et al (2018). A prospective cohort study of adolescents' memory performance and individual brain dose of microwave radiation from wireless communication. *Environ Health Perspect*. <http://bit.ly/2wJs0Pm>

Hertsgaard, M, Dowie, M (2018). "How Big Wireless Made Us Think That Cell Phones Are Safe: A Special Investigation." *The Nation*, March 29, 2018. <http://bit.ly/BigWireless>

Miller et al (2019). Risks to health and well-being from radio-frequency radiation emitted by cell phones and other wireless devices. *Front Public Health*. <http://bit.ly/2TsUNIN>

Kostoff et al (2020). Adverse health effects of 5G mobile networking technology under real-life conditions. *Toxicology Letters*. <https://pubmed.ncbi.nlm.nih.gov/31991167/>

Hardell & Carlberg (2021). Lost opportunities for cancer prevention: historical evidence on early warnings with emphasis on radiofrequency radiation. *Rev Envir Res*. <http://bit.ly/Hardell2021>

Grigoriev YG (2022). *Frequencies used in Telecommunications – An Integrated Radiobiological Assessment* (ORSAA translation; free 198 page book). <https://bit.ly/GrigorievBook>

Ishai et al (2023). Problems in evaluating the health impacts of radio frequency radiation. *Envir Res*. <https://bit.ly/Ishai2023>

Nyberg et al (2023). The European Union assessments of radiofrequency radiation health risks – another hard nut to crack (Review). *Rev Environ Health*. <https://doi.org/10.1515/reveh-2023-0046>

Also see:

[Effects of Exposure to Electromagnetic Fields](#) (studies published from 1990 on)

[Recent Research on Wireless Radiation and Electromagnetic Fields](#) (2000+ abstracts from 2016 on)

[PowerWatch: 1,670 Scientific Papers on EMF](#) (1979 - 2018)

[Effects of Cell Phone Use on Adolescents](#)

[Cell Tower Health Effects](#)

[Recent Research on WiFi Effects](#)

[Effects of Wireless Radiation on Birds and Other Wildlife](#)

[Electromagnetic fields threaten wildlife](#)