

5 G IN AUSTRALIA SUBMISSION TO AUSTRALIAN FEDERAL GOVERNMENT

# **Inquiry into 5G in Australia**

The Hon Paul Fletcher MP,

Minister for Communications,

Parliamentary Committee for the deployment, adoption and application of 5 G in Australia

Australian Federal Government.

SUMMARY: DEPLOYMENT, ADOPTION AND APPLICATION OF 5 G IN AUSTRALIA

1-ANALYSIS: HEALTH RISKS OF 5G EMR VERSUS NEED FOR 5 G EMR

2-PERSONAL EXPERIENCE HEALTH RISKS OF 5 G EMR AND NO NEED

3-SCIENTIFIC RESEARCH HEALTH RISKS OF 5 G EMR AND NO NEED

4-CONCLUSION:

5 G EMR POSES SERIOUS HEALTH RISKS to HUMAN BEINGS and ANIMALS and THERE IS NO NEED for 5 G. THEREFORE 5G NEEDS to be BANNED with NO DEPLOYMENT, NO ADOPTION and NO APPLICATION of 5 G in AUSTRALIA the SAME as in other countries where 5G has ALREADY been BANNED due the HEALTH RISKS.

1-ANALYSIS: HEALTH RISKS OF 5G EMR VERSUS NEED FOR 5 G EMR

In my opinion and that of many scientists concerning the deployment, adoption and application of 5 G in Australia there needs to be a serious debate evaluating the health risks of 5G as opposed to the need of 5G.

2-PERSONAL EXPERIENCE

I and many other persons have great difficulty leading a normal life and can become seriously ill with EMR frequencies of 2G, 3G, 4 G if these are not blocked from entering the home.

I do NOT NEED 5G and I do NOT use a smart mobile phone NOR any smart devices.

Inside my home I have a cable from the modem to the contact point and I do NOT NEED any WiFi connection and I turn my modem off at night.

If by accident I forget to turn off the modem at night and the WiFi is automatically turned on unbeknown to myself, then I cannot sleep as the high frequency waves pulsate through my head and cause intense mental agitation, headaches, lack of memory and concentration, dizziness, exhaustion and physical pain all over my body. As soon as I realise that the modem is on WiFi mode I turn the modem off and then ALL SYMPTOMS OF MENTAL AGITATION AND PHYSICAL PAIN DISAPPEAR IMMEDIATELY which is CONCLUSIVE PROOF THAT WIFI EMR EMITTING FROM THE MODEM WAS THE CAUSE.

I use various methods to block and protect myself from the pulsed directional 2G, 3 G and 4 G mobile phone towers which are mostly many hundreds of metres apart and I live as far away as possible.

5G is a new and completely different EMR system with a much higher continuous MICROWAVE frequency in which the 5 G emitting towers are placed closer together with a maximum radius of approx.150 metres and can be placed on posts outside the bedroom which makes it impossible to live far enough away to be able to block off the EMR and protect oneself.

I personally as many other persons will not be able to sleep if subjected to 5 G and this high MICROWAVE frequency will cause intense physical and mental pain, suffering and illness.

### 3-SCIENTIFIC EVIDENCE

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Deployment of 5G networks is undemocratic

- Radiation-emitting antennas are being installed outside and close to people's homes without their approval and despite their objections. We know that carriers often, if not routinely, ignore letters of objection they receive from residents they've notified under the Mobile Phone Base Station Deployment Code.
- Last year the Federal Government amended the Telecommunications (Low-impact Facilities) Determination 2018 to encompass small cell antennas so that communities, councils and state authorities would be denied the opportunity to have a say about where these antennas are located.
- By favouring of the rights of the telecommunications industry over those of the community, the Federal Government demonstrates a disregard for the principles of democracy.
- Australians have a right to have a say about the installation of radiation-emitting infrastructure outside their homes that is intended to penetrate their homes and impact on every individual within, no matter how young, old, sensitive or unwell.

Deployment of 5G networks is premature • The 5G network is being deployed well in advance of scientific evidence that it is safe. There is no research to show that exposure to the specific features of the 5G signal will be safe for humans, animals, insects and the wider environment in the long-term. • Trials of 5G technology have not incorporated surveys of affected populations to

gauge their response to exposure. • Compliance with the ARPANSA RPS3 Standard does not guarantee safety, as some of the assumptions underpinning this standard have been scientifically discredited (for example, that only thermal exposures cause health problems). Hundreds of scientists and doctors have called for a revision of the international standard on which it is based (the EMF Scientist Appeal). 1 • Overseas authorities, such as Geneva and Vaud, have called for moratoriums on the rollout of 5G networks pending the release of relevant research. • Not only is there no evidence that 5G is safe, but there is evidence that it is not. • 5G equipment emits radiofrequency radiation that is a Class 2B carcinogen. • Thousands of peer-reviewed scientific studies show adverse effects on the body, consistent with ill-health, from exposures that comply with international standards. • Some people report symptoms that correlate to exposure, including headaches, sleep problems, memory/ concentration problems, nausea and dizziness. • The frequencies above 20 GHz intended for 5G are used for military technologies, including crowd control.

Deployment of 5G is unnecessary • How many communications networks do Australians need? • The NBN is still being rolled out in order ‘to connect Australia and bridge the digital divide, NBN’s key objective is to ensure all Australians have access to fast broadband’. 2. Currently 3G and 4G networks are available as well as the 5G network that is being rolled out and 6G is on its way. Each of these networks involves the construction of a matrix of radiating antennas, with more antennas needed for higher frequencies. • Experience tells us that Australians do not want antennas located outside their homes, school and childcare centres and they are unlikely to react well to this continuing trend.

Deployment of 5G reinforces social and educational problems • 5G technology will allow Australians to do what they already do more often and more quickly. But this is not necessarily a good thing and is likely to amplify the problems that already exist from the heavy and long-term use of digital devices, such as: • addiction • reduced educational performance • problems in interpersonal communications • relationship problems • behavioural problems • Depression, suicide and anxiety. 3.

Deployment of 5G is contrary to government interests • The Australian government risks unpopularity by empowering carriers to install radiation-emitting infrastructure directly outside people’s homes and disempowering the community from having any say about it. • The introduction of 5G technology does not enjoy universal popularity. Research shows that ‘Australians need convincing on the benefits of 5G technology’, that more than 25% are concerned about the health effects of 5G technology and more than fifty are concerned about the security risks of 5G technology. 4 • The Federal government provides Australians with less protection from radiating infrastructure than other administrations with stricter standards and policies, such as Russia, Brussels, Geneva and Vaud. • It has been suggested that 5G could increase the risk of cyberattacks. 5 • Law firms have begun to take an interest in this issue, suggesting that litigation is imminent. • This means that decision-makers, individual and collective, could be held accountable for any problems that develop from the deployment and use of 5G networks and/or for violating basic Human Rights, including the right to live in a healthy environment.

• Barrister Raymond Broomhall says that this exposure constitutes ‘assault’. 6.

1 EMF Scientist Appeal, <https://www.emfscientist.org/index.php/emf-scientist-appeal>

2. <https://www.nbnco.com.au/corporate-information/about-nbn-co>

3. McLean, Lyn, ‘Wireless-wise Families’, Melb, Scribe, 2017.

4. <http://www.roymorgan.com/findings/8086-perceptions-of-5g-june-2019-201908120817>

5 Swiss-Re, ‘SONAR’, New Emerging Risk Insights’, <https://www.swissre.com/institute/research/sonar/sonar2019.html>

6. <https://emrlegaleducation.com/>

EMR and behaviour Electromagnetic radiation produces changes in the brain that may affect behaviour. These are the conclusions of a review published recently in the journal of Environmental Science and Pollution Research. The authors reviewed papers published primarily in the last ten years that had investigated the link between EMR and behaviour on animals. While not all papers showed an effect, many observed effects on: Memory and learning • impaired memory, including spatial memory • hyperactive behaviours • increased levels of 5-Ht which could lead to memory problems • changes in the hippocampus of the brain, involved memory formation, learning and emotions. • changes in emotional learning. Anxiety • increased anxiety-like behaviours • reduced GABA and aspartic acid in the cortex and hippocampus which could cause anxiety. Some effects on locomotion have also been observed. How can EMR cause these problems? According to the authors, there are three mechanism that can explain these effects: EMR alters brain structure According to the authors, studies show that exposure to EMR caused structural changes in different regions of the brain. • It increased the permeability of the blood-brain-barrier in the medulla, cerebellum, hypothalamus, hippocampus and cortex which, the authors said, is ‘detrimental to the brain’. • In the hippocampus, it’s been shown to cause degenerative charges, including loss of neurons, loss of granule cells and changes to pyramidal cells. One study showed ‘congestion, haemorrhage, enlarged perivascular spaces, and deformed nuclei’. Some research showed that exposing a pregnant animal to EMR caused degenerative effects on the hippocampus of the offspring. • In the cerebral cortex, exposure caused degenerative changes, including neuroinflammation and contracted cytoplasm. It caused degenerative changes to Purkinje cells and reduced the numbers of these cells. • In the amygdala, there is some evidence that exposure caused oxidative stress and cell death. • According to the authors, these structural changes of the brain could be caused by:

⇒ Oxidative stress (caused by free radical damage), which interferes with learning and memory, contributes to anxiety and neurodegenerative disease, can cause cell death and may promote tumours. ‘Exposure to RFEMR induces an imbalance in the oxidant/antioxidant defense system in the brain indicating that the internal environment of each brain cell was getting disturbed by the insult,’ the authors said.

⇒ Cell death, also known as apoptosis in different parts of the brain following exposure.

⇒ DNA damage. ‘Evidence suggests that RF-EMR and continuous waves are capable of inducing single-strand DNA breaks’, the authors wrote.

⇒ Changes to calcium levels in cells which can cause ‘devastating’ effects on neurons and can disassemble cytoskeletal proteins. The authors said, ‘One of the important signalling substances in the cell is calcium and an imbalance in its homeostasis in the cell can alter many functions of the cell.’ Exposure changes. EMR affects glial cells. A second explanation for how EMR causes behavioural changes is through its interaction with glial cells, the authors wrote. These cells play a role in the processing of information and research shows that exposure had negative effects on these cells. EMR affects neurotransmitters. Thirdly, the authors believe that EMR can affect behaviour by changing neurotransmitters in different areas of the brain. ‘There exists a clear relationship between exposure to RF-EMR and amino acid neurotransmitters imbalance in various parts of the brain of young and adult

rats'. For example, exposure has been shown to affect levels of norepinephrine (a stress hormone) and dopamine (responsible for feelings of wellbeing). While this research does not provide conclusive proof that exposure produces harmful effects on human behaviour, it does suggest further research is needed, particularly given that adults use mobile phones for four to five hours a day.

'After witnessing the uncontrollable growth of this technology, everyone believes that it is high time to evaluate the health risks of continuous and chronic RF-EMR exposure effects on humans and for which further studies are warranted,' the authors concluded. Narayanan, SN et al, 'Radiofrequency electromagnetic radiation-induced behavioural changes and their possible basis', Environ Sc and Pollution Research, 2019 Aug 28. doi: 10.1007/s11356-019-06278.

Magnetic fields and cancer. Magnetic fields from electrical sources, such as powerlines, wiring and appliances, have been linked to both cancer and leukemia for decades. Some have argued that the evidence for this link is 'weak' or 'inconsistent', however, that's not the case, says Dr David Carpenter, writing in the November issue of the journal Environmental Research. In his paper, Carpenter reviewed both the results of studies on this topic and their funding sources. He found that the studies that had been supported by government or independent funding nearly always found a link between magnetic fields and childhood leukemia, whereas studies supported by industry funding did not. Carpenter says there is 'strong evidence' that exposure to high magnetic fields increased the risk of adult leukemia, brain cancer and breast cancer as well as less strong evidence that it can increase the cancer risk of offspring born to exposed parents. Based on this evidence, precautions should be implemented to reduce people's exposure, he said. Carpenter, DO, 'Extremely low frequency electromagnetic fields and cancer: How source of funding affects results.' Environ Res 178, Nov 2019 108688

#### 4-CONCLUSION:

I sincerely hope that the Hon Paul Fletcher MP and the Parliamentary Committee for the deployment, adoption and application of 5 G in Australia will seriously consider the above health risks and that there is no need for 5 G and come to the conclusion that:

**5 G EMR POSES SERIOUS HEALTH RISKS to HUMAN BEINGS and ANIMALS and that THERE IS NO NEED for 5 G. THEREFORE 5G NEEDS to be BANNED with NO DEPLOYMENT, NO ADOPTION and NO APPLICATION of 5 G in AUSTRALIA the SAME as in other countries where 5G has ALREADY been BANNED due the HEALTH RISKS.**