

8/11/19

We Say NO to 5G in Australia

To the Members of the Standing Committee on Communications and the Arts,

We are writing a submission to the *Inquiry into 5G in Australia*, on behalf of the 10,536 members of the We Say NO to 5G in Australia Facebook page, and the national network of 5G action and information groups that have formed since the page's creation in October 2018. The membership across all related groups is now over 55,000 people.

We are specifically writing on behalf of those members who were unable to or did not know how to write a submission to the Inquiry into 5G in Australia, due 1st November.

We would first like to thank the Committee for allowing late submissions to the inquiry.

We understand that you have received a number of submissions related to health, environmental, personal privacy, and economic concerns about the deployment, capability, and capacity of the 5G network across Australia.

Our members are obviously also concerned about these same issues, and the concerns around the predicted health effects from the deployment of the 5G network are echoed by tens of thousands of scientists, medical professionals, and other professions worldwide; whose signatures (172,395 in total) can be found at the *International Appeal – Stop 5G on Earth and in Space* website <https://www.5gspaceappeal.org/the-appeal>.

Research related to 5G can also be found in the 55 references in **Attachment 1**; along with 11 up-to-date news articles and other publications, taken from the Physicians for Safe Technology website <https://mdsafetech.org/5g-telecommunications-science/>.

The resounding sentiment of our members (full list shown in **Attachment 2**) has resulted in putting forward two specific recommendations for the Committee to consider, investigate, and act upon as our elected representatives.

1. The outcome of the Inquiry into 5G in Australia should see a moratorium placed on the current and future-planned deployment of the 5G network technology in Australia, until consensus on the long-term safety of 5G technology on the human population and surrounding environment has been agreed to worldwide, by an independent body of scientists and medical professionals with no ties to the telecommunications industry, or Federal Government Departments and their associated portfolio agencies.
2. Following the moratorium, a full review into the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Radiation Protection Series 3 (RPS3) in relation to the review process and type of science that defines our safe levels of exposure to electromagnetic radiation must occur, with the risk of non-ionising radiation considered as a matter of priority. Again, the review must be conducted by an independent body of scientists and medical professionals with no ties to the telecommunications industry, or Federal Government Departments and their associated portfolio agencies.

The reasons for our recommendations are listed below and are related to the deployment, capability and capacity of the 5G network in Australia. The Committee should analyse the following concerns of our members closely and make a determination on the deployment of 5G in Australia based on current science on non-ionising radiation, and the precautionary principle.

1. Deployment

The deployment of 5G raises the following concerns for our members:

- There is not a single peer-reviewed study that determines whether or not this technology is safe for humans, other living beings, or the environment to implement at any large scale. The mere fact that 5G technology has not been tested for health safety should stop any debate on whether to roll it out.
- What will be the cost to Australia's public health system be in the not-too-distant future if predicted health effects are seen following the deployment?

- It is worth considering that Lloyd's of London are excluding EMF exposure from their policies. Australia is Lloyd's fourth-largest market.
- The deployment of 5G technology in terms of safe public exposure levels is based on studies reviewed by ARPANSA that ignore the concerns of 100's scientists worldwide about the dangers of non-ionising radiation.
- As the Nuremburg Code forbids non-consensual experimentation on humans, how is the deployment of untested technology, which industry regulators have admitted there are "gaps" in knowledge about its effects and more studies are needed, allowed to be deployed?
- The deployment is already seeing massive power density increases on existing infrastructure, before small cells and wireless devices are added to the network. The ARPANSA limit of 1000uW/cm² is over 10-100x that of other developed nations, and 5x over the Senate Inquiry recommendation of 200uW/cm² in 2001, citing health concerns.

2. Capability

The capability of 5G raises the following concerns for our members:

- The capability of 5G will enable further development of the IoT, which is seeing the installation of 'smart cities' across the country. Who is monitoring the electromagnetic radiation emissions from smart city infrastructure in addition to the base station and small cell infrastructure?
- The capability of 5G is yet to be proven and members have stated while there are submissions to this inquiry in favour of what 5G promises to bring, thus far, there seems to be no submissions from the industry and technological sector describing a proven business case of how the capability of 5G will enhance our lives and not cause harm. The Committee should strongly consider this point and ask why the deployment of 5G should be allowed if the expected capability cannot be proven.
- Telecommunications companies have stated that the proposed frequency bands could be as high as 86GHz and that along with the use of mmWave technology, clusters of small cells will be required to enable the predicted capability of 5G. Has the Committee considered that to enable the capability of 5G, our landscape will be littered with antennas, approximately every 150m-300m?
- Telecommunications companies do not know how EME exclusion zones will be affected at higher frequency bands, as 5G is largely being developed as it is being deployed. What is known is that a larger exclusion zone is required than for 3G and 4G. With dense clusters of small cells required for higher frequencies, many people could be at-risk of severe exposure in apartment blocks or offices opposite antennas

3. Capacity

The capacity of 5G raises the following concerns for our members:

- Will the capacity of 5G provide everything industry have promised, and to do so, will extremely large power densities be required?
- How will the beam forming technology affect human health in high capacity areas; i.e. where there is a large concentration of 5G mobile and other wireless device users, how can the effects of beam forming penetration be measured and analysed before it is implemented?

We trust you understand the impact your decision could have on the Australian population and urge you to consider the information we have provided very carefully.

Sincerely,

We Say NO to 5G in Australia.

ATTACHMENT 1 – References

Newest Articles on 5G Concerns

1. **We Have No Reason to Believe 5G Is Safe.** The technology is coming, but contrary to [what some people say](#), there could be health risks. (2019) Scientific American. Joel M. Moskowitz. Oct 17, 2019. <https://blogs.scientificamerican.com/observations/we-have-no-reason-to-believe-5g-is-safe/>
2. **5G Wireless Communication and Health Effects—A Pragmatic Review Based on Available Studies Regarding 6 to 100 GHz.** (2019) Simko M and Mattsson MO. International Journal of Environmental Research and Public Health. 2019, 16, 3406. https://www.researchgate.net/publication/335801195_5G_Wireless_Communication_and_Health_Effects-A_Pragmatic_Review_Based_on_Available_Studies_Regarding_6_to_100_GHz
3. **Comparing DNA damage induced by mobile telephony and other types of man-made electromagnetic fields.** (2019) Dimitri Panagopoulos. Mutation Research/Reviews in Mutation Research. March 2019. https://www.researchgate.net/publication/331661949_Comparing_DNA_Damage_Induced_by_Mobile_Telephony_and_Other_Types_of_Man-Made_Electromagnetic_Fields
4. **5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them.** Martin Pall PhD. 2018. Book published online with scientific references. <https://einarflydal.files.wordpress.com/2018/04/pall-to-eu-on-5g-harm-march-2018.pdf>
5. **LiFi is a paradigm-shifting 5G technology.** (2018) Haas H. Reviews in Physics. Vol 3. November 2018. Pg 26-31. <https://www.sciencedirect.com/science/article/pii/S2405428317300151>
6. **Systematic Derivation of Safety Limits for Time-Varying 5G Radiofrequency Exposure Based on Analytical Models and Thermal Dose.** (2018) Neufeld E and Kuster N. Health Phys. 2018 Sep 21. <https://www.ncbi.nlm.nih.gov/pubmed/30247338>
7. **Towards 5G communication systems: Are there health implications?** (2018) Di Ciaula A. [Int J Hyg Environ Health](#). 2018 Apr;221(3):367-375. <https://www.ncbi.nlm.nih.gov/pubmed/29402696>
8. **Wi-Fi is an important threat to human health.** (2018). Martin L Pall. Environmental Research. Volume 164. July 2018. Pages 405-416. <https://www.sciencedirect.com/science/article/pii/S0013935118300355>
9. **5G wireless telecommunications expansion: Public health and environmental implications.** (2018) Russell CL. Environ Res. 2018 Apr 11. <https://www.ncbi.nlm.nih.gov/pubmed/29655646>. or at <https://ecfsapi.fcc.gov/file/10913927726988/5%20G%20wireless%20telecommunications%20expansion%3A%20Public%20health%20and%20environmental%20implications.pdf>
10. **The human skin as a sub-THz receiver – Does 5G pose a danger to it or not?**(2018) Betzalel N et al. Environ Res. 2018 May;163:208-216. <https://www.ncbi.nlm.nih.gov/pubmed/29459303>
11. **Frequency of the resonance of the human sweat duct in a normal mode of operation.** (2018) Tripathi SR et AL. . Biomed Opt Express. 2018 Feb 23;9(3):1301-1308. <https://www.ncbi.nlm.nih.gov/pubmed/29541522>

Published Literature: 5G, High Frequency, Gigahertz RF etc.

12. **The distinguishing effects of low intensity electromagnetic radiation of different extremely high frequencies on Enterococcus hirae: growth rate inhibition and scanning electron microscopy analysis.** (2017) Hovnanyan K et al. Lett Appl Microbiol. 2017. <https://www.ncbi.nlm.nih.gov/pubmed/28609553>
13. **Effect of acute millimeter wave exposure on dopamine metabolism of NGF-treated PC12 cells.** (2017) Haas AJ et al. J Radiat Res. 2017 Feb 24;1-7. <https://www.ncbi.nlm.nih.gov/pubmed/28339776>
14. **Rural Macrocell Path Loss Models for Millimeter Wave Wireless Communications.** (2017) MacCartney GR et al. IEEE Journal . Volume: 35, Issue: 7, July 2017. <https://ieeexplore.ieee.org/abstract/document/7914696?reload=true>
15. **Human Exposure to RF Fields in 5G Downlink.** (2017) Nasim I and Kim S. Department of Electrical Engineering. Georgia Southern University. <https://arxiv.org/pdf/1711.03683.pdf>
16. **Effects of 60-GHz millimeter waves on neurite outgrowth in PC12 cells using high-content screening.** (2016) Haas AJ et al. Neurosci Lett. 2016 Apr 8;618:58-65. <https://www.ncbi.nlm.nih.gov/pubmed/26921450>
17. **Millimeter waves or extremely high frequency electromagnetic fields in the environment: what are their effects on bacteria?** (2016) Soghomonyan D, Trchounian K, Trchounian A [Appl Microbiol Biotechnol](#). 100(11):4761-71. <http://www.ncbi.nlm.nih.gov/pubmed/27087527?dopt=Abstract>
18. **5G: The Convergence of Wireless Communications.** (2015) Chávez-Santiago et al. Wirel Pers Commun. 83: 1617–1642. doi: [10.1007/s11277-015-2467-2](https://doi.org/10.1007/s11277-015-2467-2) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4821549/>
19. **Will Millimeter Waves Maximize 5G Wireless?** (2015) Larry Greenemeier. Scientific America. Jun 23, 2015 <https://www.scientificamerican.com/article/will-millimeter-waves-maximize-5g-wireless/>

20. **Safe for Generations to Come. (2015)** Wu T et al. (2015) IEEE Microw Mag. 16(2): 65–84. doi: [10.1109/MMM.2014.2377587](https://doi.org/10.1109/MMM.2014.2377587) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4629874/>
21. **“The Human Body and Millimeter-Wave Wireless Communication Systems: Interactions and Implications,” (2015).** Accepted in 2015 IEEE International Conference on Communications (ICC), NYU WIRELESS. (Wu et al., 2015A) Wu T, Rappaport TS, Collins CM, 2015 <https://arxiv.org/pdf/1503.05944.pdf>
22. **Millimeter wave promotes the synthesis of extracellular matrix and the proliferation of chondrocyte by regulating the voltage-gated K⁺ channel. (2014)** Li X et al. *J Bone Miner Metab.* 2014 Jul;32(4):367-77. <https://www.ncbi.nlm.nih.gov/pubmed/24202060>
23. **Effects of millimeter wave irradiation and equivalent thermal heating on the activity of individual neurons in the leech ganglion. (2014)** Romanenko S et al. *J Neurophysiol.* 112(10): 2423–2431. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4233276/>
24. **Transcriptome Analysis Reveals the Contribution of Thermal and the Specific Effects in Cellular Response to Millimeter Wave Exposure. (2014)** Habauzit et al., *PlosOne*. Habauzit, D. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0109435>
25. **State of knowledge on biological effects at 40–60 GHz. (2013)** Dréan et al., *Comptes Rendus Physique*, 14(5): 402–411 <http://www.sciencedirect.com/science/article/pii/S1631070513000480>
26. **Bactericidal effects of low-intensity extremely high frequency electromagnetic field: an overview with phenomenon, mechanisms, targets and consequences. (2013)** Torgomyan and Trchounian. *Crit Rev Microbiol.* 39(1):102-11. <https://www.ncbi.nlm.nih.gov/pubmed/22667685>
27. **Millimeter waves: acoustic and electromagnetic. (2013)** Ziskin MC. *Bioelectromagnetics.* 2013 Jan;34(1):3-14. <https://www.ncbi.nlm.nih.gov/pubmed/22926874>
28. **Whole-genome expression analysis in primary human keratinocyte cell cultures exposed to 60 GHz radiation. (2012)** Le Quément C et al. *Bioelectromagnetics.* 2012 Feb;33(2):147-58. <https://www.ncbi.nlm.nih.gov/pubmed/21812010>
29. **Antenna Concepts for Millimeter-Wave Automotive Radar Sensors. (2012)** Menzel W, and Moebius A, 2012. *Proceedings of the IEEE.* 100(7). <http://ieeexplore.ieee.org/document/6165323/>
30. **Millimeter-Wave Cellular Wireless Networks: Potentials and Challenges. (2012)** Sundeep et al. *Proceedings of the IEEE.* 102(3). <http://ieeexplore.ieee.org/document/6732923/>
31. **Complex permittivity of representative biological solutions in the 2-67 GHz range. (2012)** Zhadobov M et al. *Bioelectromagnetics.* 2012 May;33(4):346-55. <https://www.ncbi.nlm.nih.gov/pubmed/22012893>
32. **Modeling of reflectometric and ellipsometric spectra from the skin in the terahertz and submillimeter waves region. (2011)** Ney and Abdulhalim. *Biomed Opt.* 16(6):067006. <https://www.ncbi.nlm.nih.gov/pubmed/21721827>
33. **Effects of millimeter waves radiation on cell membrane – A brief review. (2010)** Ramundo-Orlando A. *Journal of Infrared, Millimeter, and Terahertz Waves.* 2010; 31(12):1400–1411. <https://link.springer.com/article/10.1007%2Fs10762-010-9731-z>
34. **Protein changes in macrophages induced by plasma from rats exposed to 35 GHz millimeter waves. (2010)** Sypniewska RK et al. *Bioelectromagnetics.* 2010 Dec;31(8):656-63. <https://www.ncbi.nlm.nih.gov/pubmed/20683908>
35. **The Active Denial System: A Revolutionary, Non-lethal Weapon for Today’s Battlefield. (2009).** Levine S. Center for Technology and National Security Policy National Defense University. National Defense University Press. <http://ndupress.ndu.edu/Media/News/Article/1229000/dtp-065-the-active-denial-system-a-revolutionary-non-lethal-weapon-for-todays-b/>
36. **The response of giant phospholipid vesicles to millimeter waves radiation. (2009)** Ramundo-Orlando et al. *Biochimica et Biophysica Acta (BBA) – Biomembranes.* 1788(7):1497–1507. <http://www.sciencedirect.com/science/article/pii/S0005273609001175>
37. **[Effects of millimeter wave on gene expression in human keratinocytes]. (2008)** Chen et al. *Zhejiang Da Xue Xue Bao Yi Xue Ban.* 37(1):23-8. <https://www.ncbi.nlm.nih.gov/pubmed/18275115>
38. **Human skin as arrays of helical antennas in the millimeter and submillimeter wave range. (2008)** Feldman et al. *Phys Rev Lett.* 100(12):128102 <https://www.ncbi.nlm.nih.gov/pubmed/18517913>
39. **Gene expression changes in the skin of rats induced by prolonged 35 GHz millimeter-wave exposure. (2008)** Millenbaugh NJ et al. *Radiat Res.* 2008 Mar;169(3):288-300. <https://www.ncbi.nlm.nih.gov/pubmed/18302488>
40. **[Thermoelastic excitation of acoustic waves in biological models under the effect of the high peak-power pulsed electromagnetic radiation of extremely high frequency]. (2007)** Gapeev AB et al. *Biofizika.* 2007 Nov-Dec;52(6):1087-92. <https://www.ncbi.nlm.nih.gov/pubmed/18225661>
41. **Comparison of blood pressure and thermal responses in rats exposed to millimeter wave energy or environmental heat. (2006)** Millenbaugh et al., *Shock.* 25(6):625-32. <https://www.ncbi.nlm.nih.gov/pubmed/16721271>

42. **Low-Intensity Electromagnetic Millimeter Waves for Pain Therapy.**(2006) Taras et al. Evid Based Complement Alternat Med. 3(2): 201–207. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1475937/>
43. **[The study of the mechanisms of formation of reactive oxygen species in aqueous solutions on exposure to high peak-power pulsed electromagnetic radiation of extremely high frequencies].** (2005) Gugkova OIu. Biofizika. 2005 Sep-Oct;50(5):773-9. <https://www.ncbi.nlm.nih.gov/pubmed/16248149>
44. **[Indirect and repeated electromagnetic irradiation of extremely high frequency of bacteria Escherichia coli].** (2005) Isakhanian and Trchunian Biofizika. 50(4):689-92. <https://www.ncbi.nlm.nih.gov/pubmed/16212062>
45. **Effect of millimeter waves on natural killer cell activation.** (2005) Makar et al., Bioelectromagnetics. 26(1):10-9. <https://www.ncbi.nlm.nih.gov/pubmed/15605409> DOI: [10.1002/bem.20046](https://doi.org/10.1002/bem.20046)
46. **Effects of low-intensity ultrahigh frequency electromagnetic radiation on inflammatory processes.** (2004) Lushnikov et al., Bull Exp Biol Med. 137(4):364-6. <https://www.ncbi.nlm.nih.gov/pubmed/15452603>
47. **[A comparison of the effects of millimeter and centimeter waves on tumor necrosis factor production in mouse cells].** (2004) Sinotova OA et al. Biofizika. 2004 May-Jun;49(3):545-50. <https://www.ncbi.nlm.nih.gov/pubmed/15327216>
48. **[Effects of low-intensity extremely high frequency electromagnetic radiation on chromatin structure of lymphoid cells in vivo and in vitro].** (2003) Gapeev et al. Radiats Biol Radioecol. (1):87-92. <https://www.ncbi.nlm.nih.gov/pubmed/12677665>
49. **[Decrease in the intensity of the cellular immune response and nonspecific inflammation upon exposure to extremely high frequency electromagnetic radiation].** (2003) Lushnikov et al. Biofizika. 48(5):918-25. <https://www.ncbi.nlm.nih.gov/pubmed/14582420>
50. **[Effects of extremely high-frequency electromagnetic radiation on the immune system and systemic regulation of homeostasis].** (2002) Lushnikov Radiats Biol Radioecol. 42(5):533-45. <https://www.ncbi.nlm.nih.gov/pubmed/12449822>
51. **[Effect of millimeter waves on the immune system in mice with experimental tumors].** (2002) Novoselova EG et al. Biofizika. 2002 Sep-Oct;47(5):933-42. <https://www.ncbi.nlm.nih.gov/pubmed/12397969>
52. **Reactions of keratinocytes to in vitro millimeter wave exposure.** (2001) Szabo et al. Bioelectromagnetics. 22(5):358-64. <https://www.ncbi.nlm.nih.gov/pubmed/11424160>
53. **Nonthermal effects of extremely high-frequency microwaves on chromatin conformation in cells in vitro—Dependence on physical, physiological, and genetic factors.** (2000) Belyaev IY et al. IEEE Transactions on Microwave Theory and Techniques. 2000; 48(11):2172-2179. <http://ieeexplore.ieee.org/document/884211/>
54. **Effects of Microwave and Millimeter Wave Radiation on the Eye.** (2000) In: Klauenberg B.J., Miklavčič D. (eds) Radio Frequency Radiation Dosimetry and Its Relationship to the Biological Effects of Electromagnetic Fields. D'Andrea and Chalfin. NATO Science Series (Series 3: High Technology), vol 82. Springer, Dordrecht. https://link.springer.com/chapter/10.1007/978-94-011-4191-8_43
55. **Skin heating effects of millimeter- wave irradiation-Thermal modeling results.** (2000) Nelson et al. IEEE Transactions on Microwave Theory and Techniques 48:2111-2120. <http://ieeexplore.ieee.org/document/884202/>
56. **Heating and pain sensation produced in human skin by millimeter waves: comparison to a simple thermal model.** (2000) Walters et al., Health Physics 78:259- 267. <https://www.ncbi.nlm.nih.gov/pubmed/10688448>
57. **Radio frequency radiation of millimeter wave length: potential occupational safety issues relating to surface heating.** (2000) Ryan KL et al. Health Phys. 2000 Feb;78(2):170-81. <https://www.ncbi.nlm.nih.gov/pubmed/10647983>
58. **Cardiovascular and thermal responses in rats during 94 GHz irradiation.** (1999) Jauchem JR et al. Bioelectromagnetics. 1999;20(4):264-7. <https://www.ncbi.nlm.nih.gov/pubmed/10230940>
59. **Current State and Implications of Research on Biological Effects of Millimeter Waves: A Review of the Literature.** (1998) Andrei G. Pakhomov. Bioelectromagnetics 19:393–413 <http://www.rife.org/otherresearch/millimeterwaves.html>
60. **Effect of millimeter-band radiation of nonthermal intensity on the sensitivity of staphylococcus to various antibiotics.**(1996) Bulgakova et al., Biofizika 41:1289-1293 (in Russian). <https://www.ncbi.nlm.nih.gov/pubmed/9044624>
61. **Permittivities of fresh fruits and vegetables at 0.2 to 20 GHz.**(1994) Nelson S et al. J Microw Power Electromagn Energy. 1994;29(2):81-93. <https://www.ncbi.nlm.nih.gov/pubmed/8083786>
62. **Experimental studies on the influence of millimeter radiation on light transmission through the lens.** (1994) Prost, M et al. Klin Oczna. 1994 Aug-Sep;96(8- 9):257-9. <https://www.ncbi.nlm.nih.gov/pubmed/7897988>

63. [Effect of extremely high-frequency electromagnetic radiation on the function of skin sensory endings]. (1992) Enin et al. Patol Fiziol Eksp Ter. Sep-Dec;(5-6):23-5.
<https://www.ncbi.nlm.nih.gov/pubmed/?term=1302819>
64. Effects of low-intensity electromagnetic radiation in the millimeter range on the cardio-vascular system of the white rat. (1992) Potekhina, et al. Fiziol Zh SSSR Im I M Sechenova. 1992 Jan;78(1):35-41 (in Russian). <https://www.ncbi.nlm.nih.gov/pubmed/1330714>
65. Absorption of millimeter waves by human beings and its biological implications. (1986) Gandhi and Razi. IEEE Transactions on Microwave Theory and Techniques. MTT-34(2):228-235.
<http://ieeexplore.ieee.org/document/1133316/>
66. Biological Effects of Millimeter Wavelengths. (1977) Zalyubovskaya NP. Kiev Vrachebnoye Delo. No.3, 1977.pp116-119. Declassified in 2012. Declassified. [Biological Effects of Millimeter Wavelengths. Zalyubovskaya-Declassif by CIA -1977 – biol eff mm waves](#)

ATTACHMENT 2 – List of Australian ‘Stop 5G’ groups and member totals

5G AUSTRALIAN BASED GROUPS	Members
We Say NO To 5G in Australia	10,536
We Say No To 5G IN Australia Action Group	605
5G Australia awareness group	481
5G, EMR and EMF Aware	222
5G network, microwave radiation dangers	5917
5G and other microwave towers map of Australia	244
5G Watch Australia	324
Australia says no to 5G Group	124
Stop5G Australia	6125
Stop 5G Australia Wide Action Group	1684
No 5G Australia	2102
Stop 5G in Canberra and Queanbeyan	186
5G - Sydney Under Attack	16
Make Byron Shire 5G FREE	230
NO 5G Illawarra and Southern Highlands	340
No 5G in the Blue Mountains	211
Refuse 5G and Protect the Blue Mountains	239
Stop 5G Central Coast	733
Stop5G Central West (NSW)	23
Stop 5g Eastern Suburbs and Sydney City	63
Stop 5g Georges River - Action group	84
Stop 5G Illawarra, South Coast NSW	124
Stop 5G Sydney	686
Stop 5G Sydney - Action Group	60
Stop 5G Inner West Group	44
Stop 5G Lismore	41
Stop5G in the City of Liverpool - South West	28
Stop 5G Maroubra	38
Stop 5G Mid North Coast	1995
Stop 5G Newcastle, Lake Macquarie, Hunter	277
Stop 5G Northern Beaches	1885
Stop 5G Northern Rivers NSW	2332
STOP 5G Port Macquarie	275

Stop 5G Sutherland	162
Stop 5G_Sydney Inner West	44
Stop 5G Sydney North Shore ACTION Group	35
Stop 5G Action Group - Tweed Shire NSW	333
Stop5G North West Sydney - the Hills District and Parramatta	123
Stop 5G Western Sydney	74
Stop 5G in Darwin	373
S5GG - Stop 5G Global (Brisbane based)	5094
5G - Brisbane Under Attack	62
5G Free Fraser Coast	143
5G Free Sunshine Coast	567
Maleny District NBN and 5G Info Group	285
No 4G, 4GX or future 5G Tower for Currumbin Valley	572
Stop 5G Brisbane	261
Stop 5G Gold Coast	431
Stop 5G Mackay and Surrounds	715
Stop 5G Maleny and Surrounds	59
No 5G Redcliffe	54
Stop 5G Adelaide & SA	1898
Stop 5G Tasmania	299
Stop5GTasmania (north/east)	54
Stop5GTasmania (north/west)	14
Stop5GTasmania (south/east)	25
Stop5GTasmania (south/west)	4
5G - Melbourne Under Attack	159
5G Awareness - Werribee, Hoppers and surrounds	61
5G, EMR and EMF Aware	222
Councils in Australia - Moratorium on 5G	44
5G Free Warrandyte	79
Stop 5G Frankston & Surrounds Group	169
Stop 5G Elwood 3184	47
Stop 5G Geelong	223
Stop 5G Genocide	180
Stop 5G - HillsTribe Dandenong Ranges Community	158
Stop 5G Melb Network	175
Stop 5G Melbourne	952
Stop 5G Maroondah	9
Stop5G Monash	19
Stop 5G on The Mornington Peninsula	103
Stop 5G in Torquay	151
Stop 5G Victoria	438
Stop 5G: Bendigo Awareness	233
Stop 5G South East Melbourne	175
Perth Council groups (combined)	847
Stop 5G Perth	970
TOTAL MEMBERS on 08/11/2019	55369