

Flaws in the MPE guidelines of FCC 1996

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California should not rely on the Federal Communications Commission's regulations concerning radio frequency emissions referenced in Section 332(c)(7)(B)(iv) of Title 47 of the United States Code because of the significant flaws therein. The Commission's requirements are detailed in Parts 1 and 2 of the FCC's Rules and Regulations [47 C.F.R. 1.1307(b), 1.1310, 2.1091, 2.1093].

There are many technical and scientific flaws with the "maximum permissible exposure guidelines" established by the U.S. FCC (Federal Communications Commission) in 1996, which have not been updated since then. These are too numerous to mention and describe, but among them are:

1) There is currently no standard for wireless radiation exposure.

According to the FCC website: "At the present time there is no federally-mandated radio frequency (RF) exposure standard."

<https://www.fcc.gov/general/fcc-policy-human-exposure>

2) The FCC guidelines were based on industry data from industry groups (NCRP and IEEE) from 1986 and 1991.

3) FCC is not a health and safety agency and does not have expertise in this area.

4) The guidelines assume that the only harmful radiation is that which raises the temperature of the body, in particular the temperature of the head (of a healthy adult male). This assumption was known to be false in 1996 and is very thoroughly known to be false today.

In 1999 FCC wrote that more research was needed on "non thermal effects":

"In general, while the possibility of 'non-thermal' biological effects may exist, whether or not such effects might indicate a human health hazard is not presently known. Further research is needed to determine the generality of such effects and their possible relevance, if any, to human health."

(Federal Communications Commission, Office of Engineering & Technology, "Questions and Answers about Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields", OET BULLETIN 56, Fourth Edition, August 1999, page 8)

<https://www.fcc.gov/general/oet-bulletins-line>

and more specifically here:

https://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet56/oet56e4.pdf

As used here the term "non-thermal" biological effects means biological effects that occur when the radiation does NOT raise the temperature of body tissue. By deliberately excluding all health impacts NOT associated with a rise in body tissue temperature FCC allowed itself to set the

guidelines much higher than would be the case considering those impacts. Wireless radiation can cause health impacts or biological impacts with very low levels of long term exposure, much less than is needed to raise body temperature. This was known in 1996. At the time FCC made this statement it was false, as there were already many scientific studies showing biological impacts and harm which could be called "non-thermal". Many more studies show these impacts today.

There have been literally hundreds of peer reviewed scientific studies showing a wide range of non-thermal biological effects of wireless radiation since FCC published this statement in 1999.

5) The guidelines were not based on biological impacts of wireless radiation. Obviously they should have been.

6) FCC is a corrupt and co-opted organization doing the work of industry for industry profits at the expense of public health. In 2015 the Edmond J. Safra Center for Ethics, Harvard University, published a report titled, "Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates", by Norm Alster which described this in detail.

One can download this report at

http://ethics.harvard.edu/files/center-for-ethics/files/capturedagency_alster.pdf

7) The guidelines are based on "specific absorption rate", which FCC allows manufacturers of electronic products to simulate using a liquid in a container intended to simulate the skull of a healthy adult male. There are many problems with this. Among them are the facts that children's skulls are thinner than the skulls of adult males and that children's brains are still developing. Radiating children's brains is radiating them when they are very vulnerable to wireless radiation and other toxic pollutants.

8) The FCC's maximum permissible exposure guidelines do not account for the fact that people are exposed to wireless radiation from multiple sources, often at the same time. These sources include smart utility meters, cell phones cell phone towers or distributed antenna systems (DAS), wifi and surreptitious RF radiation such as from some business telephones. Obviously the human body takes in all radiation it is exposed to. It doesn't matter that one source may be only a given number, assuming for the sake of argument that that number really is protective of human health, if there are other sources of exposure at the same time and the sum of the exposures from all the sources is greater than that number. FCC absolutely ignores this.

9) By basing the guidelines on the rate of exposure and not the total exposure over time FCC is making a big mistake. It is similar to saying that if one can be exposed to sunlight (as sunbathing on a beach) for half an hour then one could also be exposed for 24 hours or for an indefinite period. This is obviously false. Common sense tells us this. Feel free to ask us for details about this.

Overall the Federal Communications Commission, run by and sympathetic to the telecommunications industry and its huge annual profits, has done only a token step, back in 1996 and deeply flawed at the time, at protecting public health from EMF. What FCC has done is provide the appearance of protecting public health and nothing more. They have protected industry profits at the expense of public health as the above discussion shows. California cannot and must not rely on the FCC's deeply flawed 1996 guidelines to protect Californians from hazardous EMF.