

## Your response

Question	Your response
<p>Do you agree with our proposal to take steps to mitigate risks related to EMF and be in a position to hold licensees, installers and users to account if issues are identified? Please explain the reasons for your response.</p>	<p>Confidential? – N</p> <p>No; while I agree that Ofcom should 'take steps to mitigate risks related to EMF', and hold these parties responsible in relation to any issues experienced, I fundamentally disagree that adherence to ICNIRP's thermally-based Guidelines will achieve this.</p> <p>Please see attached comments.</p>
<p>Do you agree with our proposal (a) to include a condition in spectrum authorisations requiring compliance with the basic restrictions for general public exposure identified in the ICNIRP Guidelines; and (b) that this condition should apply to equipment operating at powers greater than 10 Watts?</p>	<p>Confidential? – N</p> <p>a) No b) No</p> <p>Please see attached comments.</p>
<p>Do you agree with our proposed guidance on EMF compliance and enforcement? Please explain the reasons for your response.</p>	<p>Confidential? – N</p> <p>No. Please see attached comments.</p>

Ofcom Consultation: Proposed measures to require compliance with international guidelines for limiting exposure to electromagnetic fields

Comments from: Dave Ashton

## Ofcom's Duty of Care to the Public

I understand from the legislation and documents cited below (emphasis mine) that Ofcom has a mandate to protect the public from harm arising from EMF exposure, as an integral part of the management and allocation of Radio Frequency spectrum, the granting of licences to telecommunications operators, and so on.

To do this, it takes into account the recommendations of Public Health England (PHE), which advises that the International Commission on Non-Ionizing Radiation Protection's (ICNIRP's) Guidelines should be used.

From the Ofcom consultation document:

*We take PHE's advice into account*, as appropriate, in our management of the radio spectrum.

From Ofcom's 2019 Annual Report:

'Stepping in to *protect people from harm* has also been a priority for Ofcom '. Sharon White, ex-Ofcom Chief Executive

## Communications Act 2003

General duties of OFCOM

(1) It shall be the principal duty of OFCOM, in carrying out their functions—  
(a) *to further the interests of citizens* in relation to communications matters...

## Wireless Telegraphy Act 2006

9ZA. Restrictions on imposition of limitations etc under section 9

(1) OFCOM may grant a wireless telegraphy licence subject to a limitation on the nature of a station that may be established or used, or the apparatus that may be installed or used, only if the limitation is necessary for a purpose specified in subsection (2).

(2) Those purposes are—

(b) *the protection of public health against electromagnetic fields*;

## Why I do not support Ofcom's proposals:

I believe that there are a number of health and safety requirements that any EMF guidelines need to incorporate. They must:

- 1) Be based upon objective and independent scientific and medical evidence, which does not put the interests of the technology and telecommunications industry ahead of public health.
- 2) Protect the public both from chronic exposures, and from all adverse health effects, whether of thermal or non-thermal origin.
- 3) Recognise the biological effects of artificial polarised EMFs, often from multiple sources concurrently, factoring in a probably infinite and unpredictable variety of frequencies, power density levels, modulations, and pulsation patterns.
- 4) Be set so as to fully protect vulnerable individuals, including pregnant women and fetuses, infants and children, the sick, the elderly, and electrically-sensitised individuals.
- 5) Be set so as to fully protect animals, plants, and the environment.

Given the growing prevalence of radiation-emitting transmitters in and around our homes, work places, schools, shops, public transport, and public areas, and what is effectively the mandatory exposure of the population to the EMFs from wireless telecommunications infrastructure, the adverse consequences of adhering to EMF guidelines which do **not** afford this level of protection would be almost inconceivable.

Ofcom bears a key responsibility for protecting the public through the conditions that it requires telecoms companies to meet when they deploy infrastructure such as mobile phone masts, 'small cells', and other radiation-emitting transmitters.

The requirement for Ofcom to get it right, before infrastructure is rolled-out, is especially important, because the public often has very limited, or no, right of appeal. Automatic permitted development is granted to many telecommunications installations, and even when planning consent is required (situations that the Government is seeking to minimise), health concerns cannot be taken into account when appealing against planning applications, as can be seen from the National Policy Planning Framework:

112. Advanced, high quality and reliable communications infrastructure is essential for economic growth and social well-being. *Planning policies and decisions should support the expansion of electronic communications networks, including next generation mobile technology (such as 5G)...*

116. *Local planning authorities must determine applications on planning grounds only. They should not...set health safeguards different from the International Commission guidelines for public exposure*

<https://www.gov.uk/government/publications/national-planning-policy-framework--2>

All emissions from this infrastructure will be within ICNIRP's Guidelines, which are deemed by Public Health England to be protective, and so it seems that the public must not be allowed to delay the roll-out of 'critical' infrastructure such as 5G on the grounds that the guidelines themselves may be deficient.

However, many expert and independent individuals and organisations state that ICNIRP's EMF Guidelines are **not** protective, and I include extracts from some of these concerns below (emphasis mine).

## International EMF Scientist Appeal (signed by 253 EMF experts as at 30<sup>th</sup> April 2020)

Scientific basis for our common concerns

*Numerous recent scientific publications have shown that EMF affects living organisms at levels well below most international and national guidelines. Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans. Damage goes well beyond the human race, as there is growing evidence of harmful effects to both plant and animal life.*

*Inadequate non-ionizing EMF international guidelines*

*The various agencies setting safety standards have failed to impose sufficient guidelines to protect the general public, particularly children who are more vulnerable to the effects of EMF...It is our opinion that, because the ICNIRP guidelines do not cover long-term exposure and low-intensity effects, they are insufficient to protect public health*

<https://www.emfscientist.org/index.php/emf-scientist-appeal>

## Parliamentary Assembly of the Council of Europe, Resolution 1815, 27 May 2011

8. In light of the above considerations, the Assembly recommends that the member states of the Council of Europe:

8.1. in general terms:

8.1.1. take all reasonable measures to reduce exposure to electromagnetic fields, especially to radio frequencies from mobile phones, and particularly the exposure to children and young people who seem to be most at risk from head tumours;

8.1.2. *reconsider the scientific basis for the present standards on exposure to electromagnetic fields set by the International Commission on Non-Ionising Radiation Protection, which have serious limitations, and apply ALARA principles, covering both thermal effects and the athermic or biological effects of electromagnetic emissions or radiation;*

<https://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=17994>

## European Parliament resolution of 2 April 2009 on health concerns associated with electromagnetic fields (2008/2211(INI))

The European Parliament...

H. whereas, however, there are some points that appear to be the subject of general agreement, in particular the idea that reactions to microwave exposure vary from one person to another, *the need, as a matter of priority, to conduct exposure tests under actual conditions in order to assess the non-thermal effects associated with radio-frequency (RF) fields, and the fact that children exposed to EMFs are especially vulnerable*(9) ,

I. whereas the EU has laid down exposure limits to protect workers from the effects of EMFs; *whereas on the basis of the precautionary principle such measures should also be taken for the sections of population concerned, such as residents and consumers,*

2. *Calls for particular consideration of biological effects when assessing the potential health impact of electromagnetic radiation, especially given that some studies have found the most harmful effects at lowest levels; calls for active research to address potential health problems by*

developing solutions that negate or reduce the pulsating and amplitude modulation of the frequencies used for transmission;

22. *Calls on the International Commission on Non-Ionising Radiation Protection and the World Health Organisation (WHO) to be more transparent and open to dialogue with all stakeholders in standard setting;*

28. Calls on Member States to follow the example of Sweden and to recognise persons that suffer from electrohypersensitivity as being disabled so as to grant them adequate protection as well as equal opportunities;

<https://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2009-0216+0+DOC+XML+V0//EN>

Effects of 5G wireless communication on human health - European Parliament Briefing, March 2020

*The recent academic literature illustrates that continuous wireless radiation seems to have biological effects especially considering the particular characteristics of 5G: the combination of millimetre waves, a higher frequency, the quantity of transmitters and the quantity of connections. Various studies suggest that 5G would affect the health of humans, plants, animals, insects, and microbes – and as 5G is an untested technology, a cautious approach would be prudent. The UN Universal Declaration of Human Rights, the Helsinki Accords and other international treaties recognise that informed consent prior to interventions that might affect human health is an essential, fundamental human right, which becomes even more controversial when considering children's and young people's exposure*

[https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646172/EPRS\\_BRI\(2020\)646172\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646172/EPRS_BRI(2020)646172_EN.pdf)

Cellphone Radio Frequency Radiation Studies – U.S. National Toxicology Program Fact Sheet, updated November 2019

*...the studies question the long-held assumption \* that radio frequency radiation is of no concern as long as the energy level is low and does not significantly heat the tissues*

[https://www.niehs.nih.gov/health/materials/cell\\_phone\\_radiofrequency\\_radiation\\_studies\\_508.pdf](https://www.niehs.nih.gov/health/materials/cell_phone_radiofrequency_radiation_studies_508.pdf)

\* ICNIRP's Guidelines continue to make this assumption.

World Health Organization, radiofrequency radiation and health - a hard nut to crack (Review) - Dr Lennart Hardell

*The [ICNIRP] guidelines were updated in 2009 but still do not cover cancer and other long-term or non-thermal health effects. ICNIRP gives the guideline 2 to 10 W/m<sup>2</sup> for RF radiation depending on frequency, thus only based on a short-term immediate thermal effect (19). ICNIRP is a private organisation (NGO) based in Germany. New expert members can only be elected by members of ICNIRP. Many of ICNIRP members have ties to the industry that is dependent on the ICNIRP guidelines. The guidelines are of huge economic and strategic importance to the military, telecom/IT and power industry.*

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5504984/>

## Inaccurate official assessment of radiofrequency safety by the Advisory Group on Non-ionising Radiation - Dr Sarah Starkey

Decisions about involuntary, continuous and widespread RF exposures in schools, hospitals, workplaces and public and private spaces in the UK and around the world have been made based upon inaccurate conclusions of the AGNIR report. Published in 2012, it continues to be used to justify RF exposures and dismiss concerns about possible adverse effects on health, well-being or development...*The involvement of ICNIRP scientists in the misleading [AGNIR] report calls into question the basis and validity of the international exposure guidelines. To protect public health, we need accurate official assessments of whether there are adverse effects of RF signals below current international ICNIRP guidelines, independent of the group who set the guidelines.*

<https://www.degruyter.com/view/journals/reveh/31/4/article-p493.xml>

## Mobile phones and health: is 5G being rolled out too fast? Computer Weekly, 24th April 2019

When asked whether ICNIRP is convinced that there are no non-thermal effects from 5G radiation, Van Rongen [then ICNIRP Chairman] concedes: “No, we’re not convinced of that. *We know there are non-thermal effects. But we’re not convinced that these have been established as adverse health effects.*”

*...In December 2018, researchers at the Swiss IT’IS institute, which receives some funding from the telecoms industry, advised that ICNIRP’s safety standards for exposure to electromagnetic radiation should be revised to prevent thermal damage.*

“The recommendations in the previous ICNIRP guidelines limited the power density during short pulses to 1,000 times the limit for the time-averaged incident power density,” according to their study. The results show that a peak-to-average ratio of 1,000 “may lead to permanent tissue damage for pulsed exposures, highlighting the importance of revisiting existing exposure guidelines”.

“This shows that we have a problem. *Today’s limit values are not sufficient,*” according to Esra Neufeld and Niels Kuster, the IT’IS scientists responsible for the study.

<https://www.computerweekly.com/feature/Mobile-phones-and-health-is-5G-being-rolled-out-too-fast>

## Clear Evidence of Cell-Phone RF Radiation Cancer Risk - James C. Lin (ex-ICNIRP Commission)

The NTP cell-phone RF exposure study is, by far, the largest study of its kind [5]. It was expensive and time consuming, and there may even have been better ways to perform the study. Nevertheless, *it highlights that prolonged exposure to RF radiation at, or a little above, currently existing RF exposure regulation levels could lead to tumor development...While complacencies abound for short-term exposure guidelines in terms of providing safety protection, an outstanding question persists concerning the adequacy of these guidelines for safe, long-term exposure to RF radiation at or below 1.6 or 2.0 W/kg.*

*Perhaps the time has come to judiciously reassess, revise, and update these guidelines.*

[http://www.avaate.org/IMG/pdf/lin\\_2018.pdf](http://www.avaate.org/IMG/pdf/lin_2018.pdf)

From the extracts provided above, it can be seen that most, if not all, of the measures that I suggested would serve to protect health are **not** satisfied by ICNIRP's Guidelines.

Turning to PHE, which recommends that ICNIRP's Guidelines should be followed, it is surely significant that three of its senior employees – Simon Mann, John O'Hagan, and Zenon Sienkiewicz – have until recently also been members of ICNIRP.

Following his retirement from the ICNIRP Commission, Zenon Sienkiewicz is to be replaced by another PHE employee, Nigel Cridland, so we will still have the situation whereby three people at PHE will be part of the supposedly independent group that sets the exposure levels used in the UK.

Dr Sarah Starkey:

PHE stated, "The 2012 AGNIR report considered whether there was evidence for health effects occurring in relation to exposures below the ICNIRP levels" (5). At the time of writing the report, the chairman of AGNIR was also chair of the ICNIRP standing committee on epidemiology. Currently, six members of AGNIR and *three members of PHE or its parent organisation, the Department of Health (DH), are or have been part of ICNIRP (Table 1). When the group charged with assessing whether there is evidence of health effects occurring at exposures below current ICNIRP values have members who are responsible for setting the guidelines, it introduces a conflict of interest.* How can AGNIR report that the scientific literature contains evidence of harmful effects below the current guidelines when several of them are responsible for those guidelines? *PHE provide the official advice on the safety of wireless signals within the UK, but having members in ICNIRP introduces a conflict of interest which could prevent them from acknowledging adverse effects below ICNIRP guidelines.*

## Conclusion

It seems that Ofcom has the flexibility and mandate, should it so wish, to follow precautionary and independent scientific and medical advice concerning EMF exposure levels, rather than ICNIRP's Guidelines, which are deliberately limited to thermal effects resulting from short-term exposures to electromagnetic radiation.

Everyone in the UK will suffer the consequences if Ofcom persists in following exposure guidelines which are non-precautionary, and totally unfit for purpose. For this reason, I oppose the proposals as laid out in this consultation.