

Ofcom consultation:

## **Proposed measures to require compliance with international guidelines for limiting exposure to electromagnetic fields (EMF)**

### **BAE Systems Response**

#### **Introduction**

BAE Systems thanks Ofcom for this opportunity to comment on Ofcom's proposed measures to require compliance with international guidelines regarding exposure to EMF.

BAE Systems products and platforms for air, land, sea, and space incorporate a wide variety of RF and microwave systems from ourselves and our supply chain. Development, integration, test and global sales already require us to be highly cognisant of international standards for safety, EMC matters and the guidelines as set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). We have rigorous processes to ensure and demonstrate compliance with these and other relevant Safety, Health and Environmental legislation.

We have noted that during the course of the consultation the ICNIRP guidelines have been updated from their previous 1998 edition to the newer 2020 issue. We have also noted the Ofcom FAQ that were released after the consultation was first released; and that Ofcom's own recent measurements had not found any cause for concern.

Our RF expertise also provides us with a deep understanding of antennas and electromagnetic fields in the near and far-field. So whilst fully acknowledging ICNIRP and appropriate caution with respect EM Fields, we do however as detailed in our response find that Ofcom's approach raises significant concerns with respect to the proposals.

Please find enclosed our answers to the consultation questions overleaf...

## EMF Consultation Questions and Answers

**Q1)** *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.*

We do not agree with the proposal in its current form.

BAE Systems places the highest priority on the safe design, manufacture, operation and disposal of its products. We have rigorous processes to ensure compliance with legislation. Whilst we understand Ofcom's interest in these matters, we do not believe the proposal confers any additional protection for employees or the general public and is therefore at best nugatory and at worst counter-productive.

We believe that existing SHE Standards and statutes, supported by ICNIRP guidance are, for the most part, adequate and appropriate in this area. If there are limitations in these or opportunities for improvement, then these should be addressed within existing structures, rather than in a new mandated licence condition (and its accompanying 'mandated guidance').

We therefore ask Ofcom to re-consider its far-reaching proposals and instead adopt a more proportionate lighter touch approach that would improve awareness of ICNIRP, whilst avoiding additional burdens or complexities arising from multiple regulatory regimes.

**Q2)** *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?*

We do not agree with the proposal in its current form:

- a) We are of the view that spectrum authorisations (licence conditions) and Safety, Health and Environmental concerns are, rightly, separable issues. In conflating the two, licence holders and applicants would be subject to two separate but overlapping compliance/enforcement regimes leading to duplication of at least some effort and potential confusion.
- b) The 10W threshold is not guaranteed to be useful in all circumstances and may be counter-productive. An EIRP independent of frequency and distance with respect to the near/far field transition (noting that ICNIRP recognises the difficulty of a precise definition of such) is not easily related to power densities, Specific Absorption Rate (SAR) or level of risk to people. This is particularly relevant since hazards often exist in the near field. Further complications arise when reflections and refractions from objects need to be considered.

A power density threshold would be more appropriate or perhaps a transmitter power level (the latter being easier to determine but having its own limitations).

We also note Ofcom's referencing of BS/CENELEC standards and observe that these are not freely available public domain documents and are tailored to the International Mobile Telecommunications (IMT) sector. As such, we question their appropriateness in this context.

*Q3) Do you agree with our proposed guidance on EMF compliance and enforcement? Please explain the reasons for your response.*

We do not agree with the proposed guidance on compliance and enforcement.

We have concerns with the guidance being incorporated into statute as mentioned above.

Should the proposals be accepted, suitable mechanisms/caveats would have to be included to allow protection of commercially sensitive information and information subject to national security restrictions.

We propose that Ofcom continue to pursue enforcement of licence conditions on Spectrum Management grounds and HSE continue on Safety grounds, as these mechanisms are already in place.

If the problem is a small number of users are unaware of ICNIRP guidelines then perhaps activities to increase the awareness of all users of transmitting equipment would be more appropriate. BAE Systems would be happy to support any awareness campaigns on this matter.