

Statement provided by Robert Weller regarding FCC Regulations

On Feb 3, 2011, at 11:51 AM, Robert Weller wrote via email:

Hello Lora Lee,

Thanks for contacting the FCC regarding emissions of radiofrequency (RF) energy from so-called "Smart Meters," and the bases for our guidelines limiting human exposure to RF energy generally. I congratulate CCST on its publication of "Health Impacts of Radio Frequency [Exposure] from Smart Meters."

With regard to the comments you asked us to review, we would first emphasize that the FCC is not a health and safety agency. In developing our guidelines and rules to protect the public and workers from exposure to excessive levels of RF energy, we rely on the expert advice given to us by the FDA, EPA, and other health and safety agencies, as well as the work of the expert organizations that developed the relevant safety standards themselves. With that as background, consideration of athermal ("non-thermal") effects was a major basis of EPA's support of adoption of NCRP Report No. 86 by the FCC. In its 1993 comments to the FCC, EPA emphasized statements in the NCRP report that, "...a response to RF radiation may have a 'thermal basis, an athermal basis, or a combined basis,' and that a 'determination of which of these three classes of causation is operative in a given context rests upon appropriate experimentation and inference, not presumption.'" [1] So, it seems clear that the EPA was satisfied that the NCRP Report considered effects from all types of interaction, including athermal effects.

The NCRP Report goes on to state that "...there is ample evidence that athermal interactions in biological material are not only possible but have been demonstrated for fields both strong and weak." [2] Indeed, much of the NCRP Report consists of a review of such interactions. While I believe that it is fair to say that the known adverse health effects at the frequencies of interest (*i.e.*, frequencies near 900 MHz and 2400 MHz) are probably thermal in origin (and hence governed fundamentally by limits on Specific Absorption Rate with an appropriate "safety factor"), part of the rationale for establishing more restrictive limits for exposure of the public is to provide protection from mechanisms for which there is inadequate knowledge about vulnerabilities in the population at-large. [3]

In summary, I would be reluctant to characterize the FCC's consideration of athermal effects as "research," but would instead state that the FCC relied on the expert opinions of EPA, NCRP, and others to conclude that the RF exposure limits it adopted were adequately protective of human health from all known adverse effects, regardless of whether these effects were thermal or athermal in origin.

I hope that this explanation is helpful.

Regards,

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[1] Comments of EPA to FCC in ET Docket No. 93-62, November 9, 1993 (copy attached, internal citation omitted).

[2] NCRP Report No. 86, Section 2.1, p. 7.

[3] *ibid*, Section 17.4.2, p. 282.