

LCQ16: Magnetic fields safety level

Following is the question by the Hon Tsang Yok-sing and a written reply by the Secretary for Economic Development and Labour, Mr Stephen Ip, in the Legislative Council today (February 28):

Question:

It is learnt that a scientific working group of the International Agency for Research on Cancer under the World Health Organization has classified extremely low frequency magnetic fields in environmental exposure as "possibly carcinogenic to humans". In this connection, will the Government inform this Council:

(a) of the existing legal provisions on various apparatus in respect of magnetic field formation, including the safety standards to be complied with, the safety inspections to be passed and the certificates on product safety to be obtained;

(b) whether it will strengthen the aforesaid regulation to safeguard public health; and

(c) whether it will follow the practices of some overseas countries by prescribing a safety level of magnetic fields applicable to indoor environment, and treat the level of electromagnetic radiation pollution as one of the factors for determining indoor environmental quality?

Reply:

Madam President,

According to documents and publications of the World Health Organization (WHO), "extremely low frequency (ELF) magnetic fields" refers to magnetic fields of frequency between 3 and 3 000 hertz (Hz). In June 2001, the International Agency for Research on Cancer (IARC), an agency under the administration of the WHO, classified ELF magnetic fields as Group 2B, which means that they are "possibly carcinogenic to humans", but there is so far no sufficient evidence to prove that they can cause cancer to humans. In fact, coffee has also been classified under this group. There are two higher risk categories of Group 1, "carcinogenic to humans"; and Group 2A, "probably carcinogenic to humans". Various organisations have

subsequently conducted studies on carcinogenicity of ELF magnetic fields. But up to now, the WHO's conclusion is that there is so far no sufficient evidence to show that exposure to low level ELF magnetic fields will cause cancer.

Replies to the three specific questions are as follows:

(a) & (b) In 1998, the International Commission on Non-ionizing Radiation Protection (ICNIRP) and the WHO jointly formulated guidelines on the safety levels relating to exposure to electro-magnetic fields (EMF) of different frequency ranges (cover ELF to radio frequency). In October 2005, having regard to the guidelines, the International Electrotechnical Commission (IEC) formulated the international safety standard IEC62233 on EMF levels generated by electrical products. In March 2006, the Electrical and Mechanical Services Department (EMSD) started consultation with the electrical product trade on the adoption of IEC62233 for electrical products supplied in Hong Kong, and has been discussing with them implementation details and timetable of the safety standard.

Although there is currently no statutory regulation on ELF magnetic fields, EMSD carried out tests last year on several types of domestic electrical products on the market which generate relatively higher EMF (including induction cookers, electric fans and electric dryers) and measured their EMF levels. The results showed that the EMF levels generated by all tested products complied with the requirements of IEC62233.

(c) For Hong Kong, the Hong Kong Planning Standards and Guidelines issued by the Planning Department has made reference to the above-mentioned guidelines of ICNIRP when specifying the safety standards on EMF levels generated by electricity transmission systems. Based on the ICNIRP's guidelines, the Office of Telecommunications Authority has also developed the "Code of Practice for Protection of Workers and Members of the Public against Non-ionizing Radiation Hazards from Radio Transmitting Equipment" to regulate the levels of radio frequency EMF generated by radio transmission stations.

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