

Working Group on Electric and Magnetic Fields

General Statement

1. In consultation with the Department of Health, the Electrical and Mechanical Services Department (EMSD) issued the guidelines on limits of exposure to 50/60 Hz electric and magnetic fields (EMF) in April 1990 to the local power companies, i.e. China Light & Power Co., Ltd. (CLP) and Hong Kong Electric Co., Ltd. (HEC). The guidelines were based on the recommendations of the International Non-ionizing Radiation Committee of the International Radiation Protection Association (IRPA) in collaboration with the World Health Organization, and the limits of exposure recommended for the general public are summarised as follows:-
  - (a) the electric field strength should not exceed 5 kilovolts per metre (KV/m), and
  - (b) the magnetic flux density should not exceed 0.1 millitesla (mT).
2. On the advice of the former Environmental Pollution Advisory Committee, now called Advisory Committee on Environment (ACE), a Working Group on EMF was formed in early 1993 to closely monitor and review the developments of EMF-related issues with a view to making recommendations to ACE and serve as an independent body to provide advice on this topic. The Working Group comprises representatives from 3 tertiary educational institutions (HKU, CUHK and HKPU), 2 local power companies (CLP and HEC), and relevant government departments (Department of Health, Environmental Protection Department and EMSD).
3. To keep track of the international developments in this area, the Working Group has constantly been reviewing publications, literatures and reference information on this topic obtained from various international and overseas organizations. A comprehensive computerized database on EMF information exchange and epidemiological studies was obtained from the Electricity Supply Association of Australia which contains a listing of about 2,000 papers on this subject. Besides, the Working Group has been maintaining communication links with relevant bodies in other countries to keep abreast of international developments, particularly on the researches and studies being undertaken on EMF-related issues. Over 30 researches and studies in this area were reviewed and being monitored by the Working Group.

4. Results of individual researches and studies, mainly epidemiological studies, conducted in various countries since late 70's were providing conflicting views and findings without any conclusive evidence of the risk of EMF. The Working Group has, amongst others, reviewed two recent authoritative studies by well recognized international organizations - the National Radiological Protection Board (NRPB) and the Institution of Electrical Engineers (IEE) of UK. The Advisory Group on Non-ionising Radiation of NRPB published its first report in March 1992 and then a supplementary report in April 1994 after reviewing hundreds of researches and publications worldwide, including some of the most recent studies. A similar Working Party was set up by IEE which produced its first report in July 1991 and a supplementary report in June 1994 after reviewing a vast body of international literatures on this subject. All these reports, which are both representative and up-to-date, have concluded that there is no conclusive scientific evidence of any adverse health effects on normal individual arising from exposure to EMF. This is also the conclusion drawn by the Working Group taking into consideration of the findings from its extensive investigation stated above.
5. The Working Group has also been reviewing the above EMF guidelines adopted in HK on continuous basis. After careful consideration of the standards and guidelines in over 10 overseas countries/organizations, including some authoritative international organizations such as the US Electric Power Research Institute and the UK National Radiation Protection Board, the Working Group considers that the IRPA guidelines currently adopted in HK are appropriate for the protection of public health in this respect. The Working Group had arranged joint field measurements with CLP and HEC to standardize the measurement methodology for EMF. All measurement results obtained so far by the 2 power companies were below the above exposure limits promulgated by IRPA.

6. While the public concern in this issue is well recognized, the Working Group will continue to closely monitor the developments on EMF, including some long term studies being conducted overseas, such as the 5-year national study of childhood cancer in UK (known to be the largest scale of this kind of study to date). Also, the 2 power companies have been encouraged to take a more proactive approach in conducting regular field measurements to improve public confidence of the EMF effects caused by their electricity supply equipment.

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