

Electric and Magnetic Fields (EMF)

Studies disagree on EMF and health effects

Like gravity, electric and magnetic fields (EMFs) are fundamental forces of nature. EMFs exist wherever electricity is produced, transmitted, and used.

For over two decades, scientists around the world have tried to determine whether EMFs affect health. Current and past research has not shown any conclusive evidence to support the theory that EMF is hazardous to human health.

Here are samples of the most important studies:

- A 1992 Swedish study reported an association between EMF and childhood leukemia, causing talk of regulating EMF. But in 1994, Sweden changed its position, stating: "Current know-how is not sufficient for us to tell how magnetic fields affect us, so we do not have the basis on which to set limits." The government left open the possibility of regulation based on the outcome of future studies.
- The American Medical Association and the American Cancer Society reached similar conclusions.
- The National Research Council (NRC) of the National Academy of Sciences examined more than 500 studies spanning 17 years of research. The NRC concluded: "No clear, convincing evidence exists to show that residential exposure to electric and magnetic fields is a threat to human health."

- At the end of six years of congressionally mandated research, the National Institute of Environmental Health Sciences (NIEHS) concluded in June 1999 that the evidence for a risk of cancer and other human disease from EMF around power lines is "weak."
- In March 2001, the United Kingdom National Radiological Protection Board Advisory Group stated: "Virtually all of the cellular, animal and human laboratory evidence provides no support for an increased risk of cancer incidence... In addition, the epidemiological evidence is, at best, weak. Nevertheless, considering the ubiquitous nature of power frequency electromagnetic field exposure and the concern about possible adverse health effects, the Advisory Group considers that the following areas of research [experimental and epidemiological] merit further investigation."

State health policy recommends practical approach to EMF

The State Department of Health (DOH) recommends a "prudent avoidance" policy for EMF. "Prudent avoidance" means that reasonable, practical, simple and relatively inexpensive actions should be considered to reduce exposure (to EMF)."



Public health and safety come first

HECO considers the health and safety of customers, employees, and the general public its highest priority. Given what is known about EMF, HECO:

- Designs and builds facilities to prudently avoid EMF exposure, consistent with DOH's policy.
- Complies with State construction standards for both overhead and underground lines.
- Continues to support industry, medical, and scientific research at the national level.
- Shares information with customers and employees through services such as:

EMF information packets offered to all customers at no cost. More than 30,000 customers have requested and received the packet.

Home measurements of magnetic fields on request.

EMF information section at the Hawaii State Library, main branch.

