

## What You Can Do

**T**he CPUC's 2006 decision (D.06-01-042) addressed possible EMF health effects from electric utility facilities. In a situation of scientific uncertainty and public concern, the CPUC felt it remains appropriate for utilities to continue to take no-cost and low-cost measures where feasible to reduce EMF exposure from new or upgraded utility facilities. You, too, may want to take no-cost and low-cost measures to reduce your EMF exposure at home and at work.

Human studies have not produced a consensus about any health benefits from changing the way people use electric appliances. But, if you feel reducing your EMF exposure would be beneficial, you can increase your distance from electric appliances and/or limit the amount of time you use appliances at home or at work.

For instance, you can place phone answering machines and electric clocks away from the head of your bed. Increasing your distance from these and other appliances such as televisions, computer monitors and microwave ovens can reduce your EMF exposure.

You can also reduce your EMF exposure by limiting the time you spend using personal appliances such as hair dryers, electric razors, heating pads and electric blankets. You may also want to limit the time you spend using electric cooking appliances.

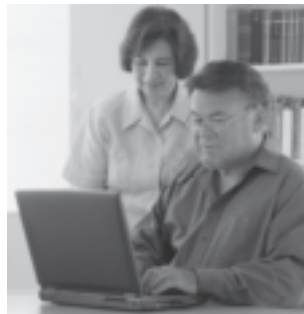


You can locate the sources of EMF in your work environment, and spend break time in lower-field areas.

It is not known whether such actions will have any impact on your health.

## Additional Information Is Available

SCE provides free EMF information packages and home/business measurements upon request. We also invite you to attend a workshop on EMF at our EMF Education Center located in Irwindale. For any of these services, please call us at 1-800-200-4SCE.



### Additional information is also available from these sources:

California Department of Health Services:

<http://www.dhs.ca.gov/ehib/emf>

U.S. EMF RAPID Program:

<http://www.niehs.nih.gov/emfrapid>

California Public Utilities Commission: <http://www.cpuc.ca.gov/static/energy/environment/electromagnetic+fields/action.htm>

International Agency for Research on Cancer:

<http://monographs.iarc.fr/ENG/Monographs/vol80/volume80.pdf>

World Health Organization International EMF Project:

<http://www.who.int/peh-emf/en/>

# UNDERSTANDING EMF

ELECTRIC AND MAGNETIC FIELDS

**Q**UESTIONS HAVE BEEN RAISED ABOUT the possible health effects of 60-Hertz (power frequency) electric and magnetic fields (EMF), which are found wherever you have electric power. This brochure contains information that will help you understand the EMF issue, plus practical tips you can use if you want to reduce your exposure at home and at work.

### Campos Eléctricos y Magnéticos (EMF):

Si desea recibir información en español, comuníquese con SCE al 1-800-441-2233.

### Reviewed by:

California Public Utilities Commission (CPUC)



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## Can EMF Harm Your Health?

**E**lectric and magnetic fields are present wherever electricity flows—around appliances and power lines, and in offices, schools and homes. Many researchers believe that if there is a risk of adverse health effects from usual residential exposures to EMF, it is probably just at the detection limit of human health studies; nonetheless, the possible risk warrants further investigation. The varying results from epidemiological studies, which looked at estimated EMF exposures and childhood leukemia, are consistent with a weak link. Laboratory experiments have shown that EMF can cause changes in living cells. There is little evidence that these changes suggest any risk to human health.

The results from many research studies have been evaluated by both national and California EMF research programs to find out if EMF poses any health risk. Given the uncertainty of the issue, the medical and scientific communities have been unable to determine that usual residential exposures to EMF cause health effects or to establish any standard or level of exposure that is known to be either safe or harmful. These conclusions remain unchanged by recent studies.

## Recent California Public Utilities Commission Findings

**I**n August 2004 the CPUC began a proceeding known as a “rulemaking” (R.04-08-020) to explore whether changes should be made to existing CPUC policies and rules concerning EMF from electric transmission lines and other utility facilities.

Through a series of hearings and conferences, the Commission evaluated the results of its existing EMF mitigation policies and

addressed possible improvements in implementation of these policies. The CPUC also explored whether new policies are warranted in light of recent scientific findings on the possible health effects of EMF exposure.

The CPUC completed the EMF rulemaking in January 2006 and presented these conclusions in Decision D.06-01-042:

- ❑ The CPUC affirmed its existing policy of requiring no-cost and low-cost mitigation measures to reduce EMF levels from new utility transmission lines and substation projects.
- ❑ The CPUC adopted rules and policies to improve utility design guidelines for reducing EMF, and called for a utility workshop to implement these policies and standardize design guidelines.
- ❑ Despite numerous studies, including one ordered by the Commission and conducted by the California Department of Health Services, the CPUC stated, “we are unable to determine whether there is a significant scientifically verifiable relationship between EMF exposure and negative health consequences.”
- ❑ The CPUC said it will “remain vigilant” regarding new scientific studies on EMF, and if these studies indicate negative EMF health impacts, the Commission will reconsider its EMF policies and open a new rulemaking if necessary.







For information about the decision, visit

<http://www.cpuc.ca.gov/static/energy/environment/electromagnetic+fields/action.htm>

## Magnetic Field Measurements

### Magnetic Fields at Home



(Measurements are in milligauss.)

	1.2" away	12" away	39" away
 Microwave Oven	750 to 2,000	40 to 80	3 to 8
 Clothes Washer	8 to 400	2 to 30	0.1 to 2
 Electric Range	60 to 2,000	4 to 40	0.1 to 1
 Fluorescent Lamp	400 to 4,000	5 to 20	0.1 to 3
 Hair Dryer	60 to 20,000	1 to 70	0.1 to 3
 Television	25 to 500	0.4 to 20	0.1 to 2

Source: Adapted from Gauger 1985.

### Magnetic Fields Outside

(Maximum values may be lower for some California utilities.)

 Distribution Lines	1 to 80 milligauss under the line
 Transmission Lines	1 to 300 milligauss edge of right-of-way