# EMF

## Electric & Magnetic Fields

### What you should know about EMF safety and research

## Understanding electric and magnetic fields

Electricity is essential to our modern world. But over the years, public concern has arisen from confusing and sometimes conflicting research about the electric and magnetic fields (EMF) in everyday life.

Electric and magnetic fields are invisible fields created by both natural and man-made sources. A natural source of EMF is the earth's magnetic force field, while man-made sources include anything that conducts or consumes electricity — such as an alarm clock, refrigerator or power line. The strength of both electric and magnetic fields weaken quickly as you move away from the source, just like heat from a fire.

## Magnetic fields indoors

Measured in milligauss, a unit of magnetic field intensity
Source: EMF Rapid, June 2002, National Institute of Environmental Health Sciences

| Appliances | At 6 inches | At 1 foot | At 2 feet |
|---|---|---|---|
| Microwave Oven | 100-300 | 1-200 | 1-30 |
| Clothes Washer | 4-100 | 1-30 | 1-6 |
| Portable Heater | 5-150 | 1-40 | 1-8 |
| Television | N/A | 7-20 | 2-8 |
| Hair Dryer | 1-700 | 1-70 | 1-10 |
| Electric Range | 20-200 | 8-30 | 2-9 |

## Magnetic fields outdoors

Measured in milligauss, a unit of magnetic field intensity
Source: EMF Rapid, June 2002, National Institute of Environmental Health Sciences

| Distribution lines | Transmission lines |
|---|---|
| 1-70 under the line | 5-30 edge of right of way |

## What does the research say?

Scientists have been researching potential health effects from EMF exposure since the 1960s. Multidisciplinary review studies have consistently concluded there is insufficient evidence to establish causality between EMF and adverse human health hazards.

Because of the lack of evidence, no "safe" or "unsafe" levels of exposure to EMF have been established by the government or health organizations.

## PGE is committed to your safety

At PGE, safety is our main focus. We understand you may have concerns about EMF at home, in the workplace and around power lines. PGE works to address those concerns by:

- Employing EMF industry best practices in siting power facilities
- Keeping informed on the latest research from universities, federal and state health agencies, industry sponsored programs and international health organizations
- Serving as a source of information for elected officials, government agencies and electric utility regulators
- Sharing accurate and objective information about EMF with our customers.

## EMF research

PGE is committed to continually learning about the possible effects of EMF exposure. These reliable third-party sources provide the latest information on EMF research. Scan the QR codes for more information.

**National Institute of Environmental Health Sciences**

**World Health Organization**

**Electric Power Research Institute**

***More information is at portlandgeneral.com/electric-and-magnetic-fields***

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