The transmission, distribution and use of electric power results in weak electric and magnetic fields. An electric magnetic field is an invisible force field that occurs naturally, such as lightning and the Earth’s magnetic field, and also as a byproduct of technology. Electric magnetic fields surround any electrical device including power lines, house wiring and appliances. Compare the magnetic field levels of appliances to electric transmission and distribution lines. You will see that many common items are higher than LIPA’s transmission and distribution system.

www.lipower.org
# Magnetic Field Levels Around Homes

(Measured in milligauss, mG)

### Measured Magnetic Fields Around Power Lines

<table>
<thead>
<tr>
<th>Distribution Lines (34.5 kV and under)</th>
<th>50 feet</th>
<th>100 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - 27 mG</td>
<td>&lt;1 - 5 mG</td>
<td>&lt;1 - 2 mG</td>
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<tr>
<th>Transmission Lines (115-500 kV)</th>
<th>Edge of right-of-way</th>
<th>100 feet from edge of R/W</th>
</tr>
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<tr>
<td>&lt;10 - 69 mG</td>
<td>2 - 40 mG</td>
<td></td>
</tr>
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</table>

### Notes:
1. Sources of magnetic fields found in homes have been measured at:
   - household wiring
   - ground currents on cold water pipe
   - distribution lines
2. Under peak load conditions, we calculate that the magnetic fields at the edge of right-of-way for transmission lines would not exceed 150 mG.

### Measured Magnetic Fields

- **Fluorescent Desk Lamp**
  - at 1 Inch Away = 400 to 4,000 mG
  - at 1 Foot Away = 6 to 20 mG
  - at 3 Feet Away = <0.1 to 1.1 mG

- **Television**
  - at 3 Feet Away = 20 to 300 mG
  - at 1 Foot Away = 0.4 to 20 mG
  - at 3 Feet Away = <0.1 to 1.5 mG

- **Microwave**
  - at 1 Inch Away = 750 to 2,000 mG
  - at 1 Foot Away = 40 to 90 mG
  - at 3 Feet Away = 3 to 8 mG

- **Electric Range**
  - at 1 Inch Away = 60 to 2,000 mG
  - at 1 Foot Away = 4 to 40 mG
  - at 3 Feet Away = <0.1 to 7 mG

- **Toaster**
  - at 1 Inch Away = 70 to 150 mG
  - at 1 Foot Away = 0.6 to 7 mG
  - at 3 Feet Away = <0.1 to 0.11 mG

- **Drills**
  - at 1 Inch Away = 4,000 to 8,000 mG
  - at 1 Foot Away = 22 to 31 mG
  - at 3 Feet Away = 0.8 to 2 mG

- **Blenders**
  - at 1 Inch Away = 200 to 1,200 mG
  - at 1 Foot Away = 5.2 to 17 mG
  - at 3 Feet Away = 0.3 to 2.1 mG

- **Clothes Washer**
  - at 1 Inch Away = 7 to 400 mG
  - at 1 Foot Away = 0.8 to 3 mG
  - at 3 Feet Away = <0.1 to 0.48 mG

- **Clothes Dryer**
  - at 1 Inch Away = 3 to 70 mG
  - at 1 Foot Away = 1.5 to 29 mG
  - at 3 Feet Away = 0.1 to 1 mG

- **Irons**
  - at 1 Inch Away = 80 to 300 mG
  - at 1 Foot Away = 1.2 to 3.1 mG
  - at 3 Feet Away = 0.1 to 0.2 mG

- **Coffee Makers**
  - at 1 Inch Away = 15 to 250 mG
  - at 1 Foot Away = 0.9 to 1.2 mG
  - at 3 Feet Away = <0.1 mG

- **Electric Blanket**
  - at 1 Inch Away = 3 to 50 mG

- **Fluorescent Fixtures**
  - at 1 Inch Away = 130 to 2,000 mG
  - at 1 Foot Away = 2 to 32 mG
  - at 3 Feet Away = <0.1 to 2.8 mG

- **Hair Dryer (hand held)**
  - at 1 Inch Away = 40 to 200 mG
  - at 1 Foot Away = <0.1 to 1.5 mG
  - at 3 Feet Away = <0.1

### Transmission Lines (115-500 kV)

- Edge of right-of-way: 50 feet, 100 feet
- 2 - 27 mG, <1 - 5 mG, <1 - 2 mG

- 100 feet from edge of R/W: <10 - 69 mG, 2 - 40 mG

- 50 feet: 2 - 27 mG, <1 - 5 mG, <1 - 2 mG

- 100 feet: <10 - 69 mG, 2 - 40 mG

### Distribution Lines (34.5 kV and under)

- 50 feet: 2 - 27 mG, <1 - 5 mG, <1 - 2 mG

- 100 feet: <10 - 69 mG, 2 - 40 mG