

Kino to DeMoss-Petrie Transmission Line Project



Electric and Magnetic Fields

Electric and magnetic fields (EMFs) are part of our everyday environment. They are emitted by power lines and other electrically powered systems that light, cool and heat our homes, provide our communications and entertainment and support other aspects of our modern lifestyle. EMFs also are produced naturally by the Earth.

For more than 30 years, scientists and researchers from universities, national laboratories, health agencies, the World Health Organization and other groups have conducted research activities into possible health effects of EMFs. According to

research by the World Health Organization, the National Research Council, the National Institute of Environmental Health Sciences, the National Cancer Institute and other organizations, there are no confirmed health risks caused by exposure to low-level EMFs.

EMFs weaken significantly as they extend away from the source. TEP designs and builds its equipment to meet or exceed national building and safety standards. Median magnetic field strength, measured in milliGauss (mG), for common household items and overhead power lines is shown in the chart below.

Typical Magnetic Field Levels at Various Distances
Measured in milliGauss (mG)

		0 inches away*	6 inches away	1 foot away	2 feet away	3 feet away	33 feet away	66 feet away	98 feet away	131 feet away
Appliances	Electric Blanket	22 mG								
	Vacuum Cleaner		300 mG	60 mG	10 mG	1 mG				
	Electric Oven		9 mG	4 mG						
	Hair Dryer		300 mG	1 mG						
	Microwave Oven		200 mG	4 mG	10 mG	2 mG				
	Refrigerator		2 mG	2 mG	1 mG					
	Computer & Monitor		14 mG	5 mG	2 mG					
	Washing Machine		20 mG	7 mG	1 mG					
Power Lines	25 kV	10 mG					5 mG	2 mG	1 mG	
	69 kV	18 mG					6 mG	3 mG	1 mG	
	138 kV	33 mG					22 mG	11 mG	5 mG	3mG
	230 kV	38 mG					28 mG	15 mG	8 mG	5 mG
	500 kV	81 mG					72 mG	51 mG	33 mG	21 mG

* Measurements taken directly beneath power lines, typically at about three feet above the ground. A milliGauss is one thousandth of a Gauss, a unit of measurement of magnetic flux density.

Source (appliances): National Institute of Environmental Health Sciences
Source (power lines): BC Hydro

Learn more at tep.com/electric-and-magnetic-fields