



# Appeal to Fellow Citizens -- Help Remove Cancer-Promoting EMFs from Power Lines, Homes, Schools, and Workplaces



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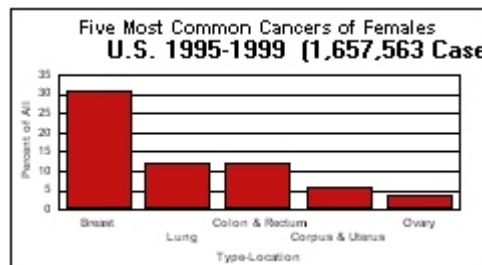
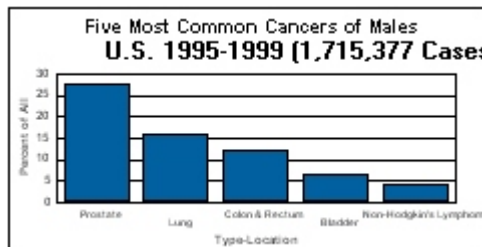
## Shocking Discoveries

Electricity, among the most marvelous discoveries and widely used inventions of modern technology is a blessing to mankind when carefully managed, and when its effects on biological systems are understood and respected. But, like alcohol, drugs, tobacco, dioxin and certain chlorinated hydrocarbons, when electricity is not properly controlled, or its beneficiaries are over-exposed, electricity destroys certain functions of the brain and the immune system and increases proliferation of cancer. Electrical pollution of the environment is out of sight and out of mind.

## Who Has Cancer?

### Michigan Has 51,000 New Cases per Year

In Michigan 26,843 male and 24,359 female new cancer cases were registered in 1999.<sup>1</sup> Credible scientific evidence indicates that cancer in humans is proliferated by excessive exposure to electric and magnetic fields (EMF) from electric utility power lines carried by primary neutral ground wires, and generated by modern electronic equipment in homes, in schools, and in work places. Because EMF proliferates cancer, adversely stimulates the brain, disturbs mental health, and compromises the immune system thus exacerbating effects of other diseases, we believe every reasonable attempt to reduce electrical pollution and human exposure to unnecessary EMF health risks ought to be achieved.



## Odds Ratio: Excess EMF = Excess Cancer Studies Range from 0 to 8 x More Likely

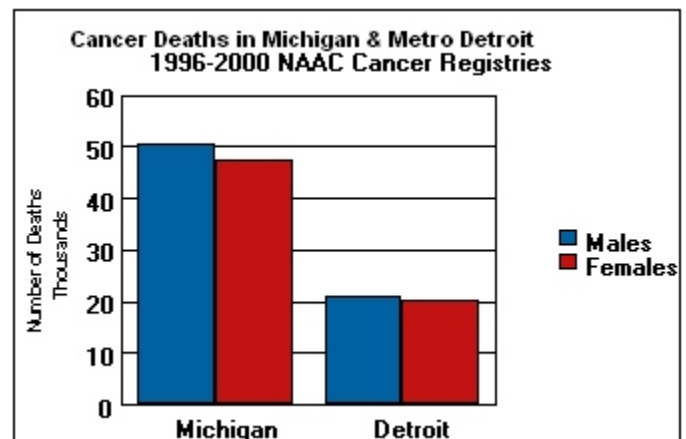
Therefore, we are appealing to the Public Service Commission, the Legislature and the Governor of the State of Michigan to initiate and establish a program to systematically monitor the quality of electricity delivered to customers by utilities, to assess the sources of electrical pollution in homes, schools, and workplaces, to promulgate laws establishing safe EMF standards for electrical quality in the living environment, and to prescribe and enforce penalties for those perpetrators and violators who do not comply.

## Let's Clean-Up Our Electricity

We ask the support of Family and Friends of deceased and suffering loved ones to exercise their civil rights and moral duty to help reduce the prevalence of brain electrical pollution in our living environment and reduce this risk of cancer in the living as much as possible.

## Learned from 30 Years of Scientific Investigations---

Several studies have confirmed that the number of deaths due to leukemia and brain tumors in children and adults is 20 to 40 percent greater among those exposed to excessive electric and magnetic fields in the home than in controls living in low EMF homes. Likewise, the number of deaths attributed to brain tumors, leukemia, lymphoma, cancer of the prostate and the breast, musculoskeletal disease and diseases of the blood-forming organs were significantly higher among those employed by electrical utilities and electrical construction workers, e.g., electrical engineers, electricians, electronics technicians, power station operators, telegraph, telephone,



<sup>1</sup>Source United States Cancer Statistics, 1999. Includes all cancer Registries, e.g., North American Association of Central Cancer Registries.

and power linemen and servicemen compared to others not employed in those jobs.

## Dirty Electricity Cancer-Carrying Current --

Electricity comes from the generator as “clean” 60-Hz (cycles/second) alternating current (AC). It is contaminated with numerous high frequency electric and magnetic impulses from nonlinear loads on the lines, some by customers, some generated within the power lines and carried on the 60-Hz waveform into homes on the primary (utility) neutral-to earth down ground. The primary neutral is bonded to secondary (user) neutral wires which are in the walls throughout the house, and induced on water lines thus distributed throughout the living environment. The prevalence of cancer increased as the 180-Hz current, and the sum of the 3<sup>rd</sup> harmonic (180 Hz), the 5<sup>th</sup> harmonic (300 Hz), and the 7<sup>th</sup> harmonic (420 Hz) increased in the living area of homes with high current wire configurations, in Denver, Colorado, reported in 2002.

Simply stated, the 60-Hz clean electricity that we are told is the power supply that we purchase is polluted with higher frequency harmonics that were causing cancer and illness

in humans, poor health, and low milk production in cows. Such electricity is known as “dirty” electricity by power company employees. It is known for causing overheating of wires in electric circuits in transformers, motors, controls in service panels; and it can cause fires in buildings. The problem is worse during periods of drought (i.e., Electrical Black-Out 2003), and when the earth is frozen. Then the soil is a poor conductor and the current remains on the neutral lines which may be inadequate to handle the load. Thus the transient currents resonate (oscillate) within the power lines, producing harmonics of enormous frequencies. The same odd numbered 3<sup>rd</sup>, 5<sup>th</sup>, 7<sup>th</sup>, etc. harmonics on power supplies were correlated with decreased milk production of cows in Michigan, Wisconsin, and Minnesota.

## Suicide Higher in Electrical Workers

The suicide rate was twice as high for electricians and 1.5 times as high for linemen than for workers not employed in those jobs

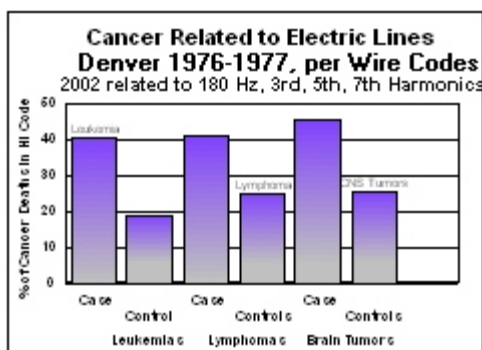
among a sample of 6,000 out of a total of 139,000 employees of five electric utility companies in one study. A higher suicide rate was also related to the location of residences of subjects relative to transmission lines in England.

Lower melatonin in blood of utility employees working on 3-phase lines two hours or more per day, and in substations, was found in a Colorado study. Lower melatonin in blood was reported in four other studies of electrical employees, Swiss railway workers, office workers viewing computer television monitors (visual display units), and cellular telephone users who used the phone more than 25 minutes per day. Melatonin helps to prevent proliferation of cancer, and is a strong antioxidant, reducing chemical and microbial toxins, and DNA free chemical radicals in the body. EMF reduces the secretion of melatonin and serotonin from which it is derived in the pineal gland within the brain.

Serotonin is a chemical mediator of inflammation and the largest single neurotransmitter system of the brain. Its secretion and physiological functions throughout the body mediate stress and pain affecting both immune and nervous system functions through the hypothalamic-pituitary-adrenal axis [hormonal control]. Numerous recent studies have demonstrated that external exposure of the cranium (skull) to pulsed electromagnetic signals directly affects serotonin receptors in the brain. Radiating the brain with selected frequency EMF on one side of the cranium may cause the mentally depressed patient to feel better whereas radiating the other side may cause the patient to feel worse. While selective-frequency transcranial mental stimulation with pulses (rPTMS) in the range of 10-20 Hz may eventually be proved beneficial for some mentally ill patients, there is no doubt that EMF exposure to 60 Hz and higher frequencies produces electric fields within the brain that affect serotonin receptors and transmission of nerve signals affecting numerous physiological functions in the body.

Melatonin Reduced in Cows--A study of effects of exposing dairy cows to EMF at McDonald College Campus, Sainte-Anne de Bellevue, at McGill University, Quebec, Canada, resulted in several changes in metabolic and blood parameters compared to controls: Food consumption was higher; Milk production was not affected in the 28-day trial period; Fat content (%) in milk was higher; Body weight increased; Melatonin concentrations in blood decreased; Progesterone, a steroid hormone produced in the ovaries and elsewhere, increased in pregnant lactating cows; Length of the estrus cycle increased; Insulin-like growth factor (IGF-1) increased in blood; Growth hormone (GH) was modified; Mineral element concentrations in blood and cerebrospinal fluid (CSF) changed compared to control cows.

Investigators explained that the changes in CSF were consistent with a marginal weakening of the blood-brain barrier due to 60-Hz EMF exposure; and the increased IGF-1

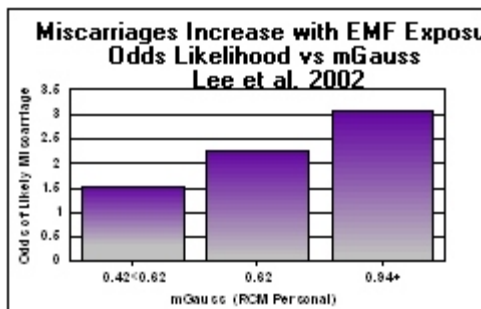


is also consistent with the hypothesis of EMF inhibition of melatonin secretion, since changes in melatonin secretion may directly influence IGF-1 secretion. Workers at the National Institutes of Health have shown that IGF-1 stimulated proliferation of certain types of cancer cells, while melatonin inhibited growth of human breast and ovarian cancer cells.

Demonstrated relationships between EMF, increased food intake, increased body weight gain, in conjunction with IGF-1, and growth hormone in cows has raised questions about excessive exposure to EMF of people watching television, computers, electronic games and musical devices and the present concerns of obesity, and a possible relationship to a high incidence of diabetes in the U.S. population.

Complaints of persons highly exposed to EMF with comparable low exposure controls were as follows:

Increased headaches, sleep disturbances, heartache (pain in the chest), stomach pain, increased fatigue, irritability and dizziness. At least 17 studies indicate relationship of EMF in miscarriages.



Pathologically these patients had higher incidence of central nervous system disturbances, cardiovascular disturbances, and gastrointestinal tract disease (gastritis, cholecystitis).

Michigan State University students complained that excessive use of the Internet seemed to be causing them to sleep poorly and was interfering with their academic achievement according to the State News. Students also have free access to television, computers and printers, cell phones, and hand-held wireless electronic devices with earphones in addition to the Internet. Computers are now in nearly all classrooms from pre-school through college, and in most offices and workplaces

## Who is Monitoring the Power Quality for Health Effects?

Electricity is the most pervasive of all environmental health influences since it is present nearly everywhere, and the electromagnetic part of it is largely uncontrolled by the utilities that produce and distribute it, except for attempts to protect electrical equipment in hospitals and some industries. Utilities seem to assume that electrical pollution is your problem; Not Theirs!

No organization, corporation, utility, state or federal agency is monitoring the quality of electricity, i.e. quantity of electric and magnetic fields delivered by utilities into the homes, schools, farms, businesses, offices or work-places of the citizens of Michigan.

In contrast, the Michigan Departments of Agriculture and Health have authority to inspect every food retail and production facility for compliance with standards for purity and sanitation, charge violators with unlawful acts or negligence, and refer the cases to courts for administration of justice where penalties are inflicted or violators are prohibited from putting their product on the market.

Likewise, the Department of Justice gives authority to State Police, Sheriffs, and local police departments to monitor automobiles for safety features, control traffic and the rate of speed on highways, issue violation tickets, and impose fines through the court system, and even arrest and fine you for not having your seat-belt in place or for having too much alcohol on your breath.

It's time to stop deceiving the public, dodging the truth about the dangers of EMF, and begin acting as responsible citizens whether your income is from inside or outside of the utilities. Methods and procedures for monitoring uncontrolled



electrical current, and electric and magnetic fields, and remedies or procedures for mitigating the problems are known. An inexpensive meter for detecting radio-frequency radiation on household wiring is available, and UL approved filters for skimming electrical r-f pollution from household outlets have been successfully applied in homes, farms, and schools in Michigan, Wisconsin, Minnesota, Virginia, and elsewhere and are available. Visit <http://www.electrictpollution.com> on the web

or phone (608) 989-2571, to learn more about Electrical Pollution Solutions.

The PSC has conducted some investigations in the past but no action was taken since the PSC relied largely on opinions of power company experts and their attorneys. Individuals, dairy farmers, and dog kennel operators have had to sue power companies to get relief in the courts. We contend that private citizens should not be required to file suit against powerful utility corporations and cooperatives, supposedly serving the public interest, in order to have an electrical hazard corrected by the utility creating the hazards to health of family and property.

Michigan's Attorney General filed a complaint with the PSC in 1998 to prohibit Consumers Energy Company from using the earth as a return circuit from their primary neutral-to-

earth down grounds, which account for some 70% of the current completing the return circuit to the substation, Case U-11684, which resulted in a new Docket 13934.

## What We Can Do?

We have filed a formal Complaint with the Michigan Public Service Commission on Behalf of Deceased and Suffering Family and Friends according to the invitation for comments in the new PSC Docket No. U-13934 with regard to “promulgation of standards” for stray voltage in Michigan. [Note: The EMF described here is not “Stray Voltage” in terms of the flawed definitions used by power company experts to deny liability for damages to dairy herds; although EMFs are major components of SV.]

We have recommended the following remedies for mitigation of electrical pollution and thereby reducing the risk for harmful effects of EMFs on the health of citizens, i.e., various forms of cancer and diseases commonly associated with compromised immune systems of humans and animals:

- 1) To establish standards for reasonably safe permissible levels of electricity, electric fields, and electromagnetic fields in occupied areas of homes, schools and workplaces of citizens. Standards adopted in European countries, based on time and intensity of EMF, permit 10 to 100 times less EMF exposure than U. S. Standards.
- 2) Engage the Michigan Legislature and the Governor of the State of Michigan:
  - (A) to establish an Independent Power Quality Control Division, perhaps within the Department of Public health, or other agency determined by the legislature.
  - (B) to monitor the quality of electrical power delivered to homes, schools, businesses, and workplaces by electrical utilities, suppliers, providers, and communication utilities contributing to the total EMF pollution of the environment, and
  - (C) to assess by prescribed measurement, the quality of electric power and the electrical environment in such establishments in terms of reasonable standards for safe health.
  - (D) to determine appropriate penalties, fines, or confinement to be assessed on executives of utilities and business establishments, agencies of the State of Michigan or Federal Government, and private corporations which violate such provisions and subject the public to unsafe electrical environmental conditions.
  - (E) Establish a Bioelectric Institute, under the Dean for Graduate Research and Development in the College of Osteopathic Medicine, and Director of the Food Toxicology Center, at Michigan State

University, East Lansing, for the purpose of serving as a resource for unbiased information and directing research regarding effects of EMF on humans, animals, and the environment.

- (F) Establish a Bioelectric Fund to appropriately support the activities of the Bioelectric Institute, and the Independent Electrical Quality Control Division of the State. The fund will be financed by assessing a Bioelectric Fee to all electric and communication utilities doing business in Michigan based on the kilowatt hours (89,488 Million kWh, in 2003) of electric or electronic service they provide to customers, and the consumption of electrical energy in communication systems delivered into the environment by emissions from towers, and electronic wireless devices in Michigan. Such fee will be collected and distributed by the Treasurer of the State of Michigan.
- 3) Require utilities to notify customers that electric and magnetic fields (EMF) may exist on their power supply, and advise them of the potential harmful effects of excessive exposure to EMF and how to avoid it.
- 4) Advise customers that electrical frequency filters and shielded neutral isolation transformers are available, and require utilities to provide such transformers to all customers where necessary to reduce the EMF from utility neutrals and largely eliminate the health risk.
- 5) Require utilities to clean-up the dirty electricity carried on their power lines from one customer to another thus endangering the health and welfare of all customers being served by the same distribution or transmission lines.

**Our comments and appeal** for the PSC will be posted on the website: <http://pq.goeke.net> We have also submitted a notebook full of Exhibits.

**Please send your comments to:**

**J. Peter Lark, Chair  
Michigan Public Service Commission  
6545 Mercantile Way  
Lansing, MI 48911**

**Or email him at: [mpsc.webmaster@michigan.gov](mailto:mpsc.webmaster@michigan.gov)  
Phone: Phone (517) 241-6222 or 800-292-9555**

**Also, please contact Your District Representative,  
Your Senator, and the Governor, State Capitol,  
Lansing, MI 48913.**

**With God’s help and your support,  
Good things can happen!**

