



## Legislative Letter

### To Members of the Michigan House of Representatives, Michigan Senate, and Administrative Officers



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#### **A Creativity Crisis in Michigan –**

Health authorities have warned that “Chronic Disease is Now the New Public Health Threat,” just as diphtheria and infectious diseases were 100 years ago. A national epidemic of chronic disease--Cancer, Heart Disease, and Diabetes--is occurring in the United States, and responsible authorities will not admit a demonstrated probable cause nor recommend a plausible prevention.

Front-page headlines in the Lansing State Journal and the Associated Press emphasized that “Cancer Becomes the Top Killer in U.S.” (1/20/2005) and “Heart Disease, Cancers, and Diabetes Are Among Deadliest and Costliest to Treat for Americans.” Chronic illness accounted for more than three-quarters of the \$1.55 trillion spent on health care in 2003. The world’s largest three automakers claim that health insurance costs are breaking them and rendering them uncompetitive in world markets.

Meanwhile, investigators reported in several hundred credible research articles that chronic exposure to uncontrolled electricity and electromagnetic fields (EMF) from power lines, cellular telephones, computers, and other radio frequency sources are affecting health of humans in homes, schools, workplaces, and on farms. Designated electrical authorities--the Michigan Public Service Commission whose present Chairman was co-filer with former Attorney General Frank Kelly--in a Complaint to Stop Consumer’s Energy from depositing toxic, dirty electricity from the utility neutral-to-ground wire onto private premises, into homes, . . . and destroying farm families, have apparently switched sides.

Chairman of the MPSC, appointed by the Governor, has proposed a new charade of Administrative Rules (Laws) that would **not** require utilities to identify the sources of electrical and magnetic fields (EMFs) that are present on their power lines when requested to investigate customer complaints. Yet, EMF has been shown to cause damage to livestock, farm families, and residents of cities exposed to excessive electrons from the ground wire, cellular telephones, and overhead transmission lines.

Electronic financial interests have been hustling to see who can deliver the most electrons into the homes, hearts, and heads of the public without their permission. “Electric Powered Broadband, High-speed internet access, via power lines, is coming to mid-Michigan” was promoted with headlines in Lansing State Journal (1/22/06).

A month earlier, a Michigan State University Professor and others had testified that EMF from the utility ground wire

caused heart disease, diabetes, and nonHodgkins lymphoma to residents living within 100 yards of a cell phone station on the water tower in East Lansing, MI. The Comments were in opposition to the MPSC Proposed Rules--Docket 13934.

The broadband internet on the power line is already in place at Michigan State University, on the water tower in Grand Ledge, MI, and is scheduled to come to St. Johns, 20 miles north of Lansing shortly. The Broadband Power Line Company moved ahead without providing any proof that the 130 megaHertz (MHz) electrons delivered into homes, schools, and businesses will not affect mental and physical health of residents. People will be exposed whether they are or are not users of the uncontrolled EMF.

The East Lansing experience involved heart-fibrillation, blood pressure, diabetes, and nonHodgkin’s lymphoma of residents in East Lansing who were exposed to similar radio frequency EMF radiating into living rooms from ground wire and signal generator on the Water Tower. **Broadband powerline promoters need to prove that their 130 MHz signal will not affect human health.** A large body of bioelectrical-biomedical literature has been ignored, either from incompetence or by design by the MPSC and their advisors at universities, where utilities maintain offices. Or perhaps Grand Ledge City Council has better information about risks involved with transmitters on their water tower than Nextel provided to East Lansing City Council Planning Commission and to residents.

Rather than advising the public how to avoid over-exposure and health-related problems, the objective of state agencies seems to be a tacit conspiracy with the electrical-electronics industry to “keep the people ignorant” a political-correctness tactic used by government and the electronics industries. In an honest Court of Law, the tactic might be considered “failure to disclose dangers and health risks of the product you are promoting, i.e. electronic fraud.”

Public responsibility has not prevented Michigan State University from hiring a retired Consumers Energy power quality executive to their staff to advise the Agricultural Electrical Council and to furnish its sophistry about electricity to the PSC. Nor has it prevented the Sitting Governor from hiring “a former political affairs director for CMS Energy and its main subsidiary, Consumers Energy” from becoming her election campaign manager. Some might call this “insider-trading” or collusion! Some will remember when Billy (W.T.) McCormick, former Chairman and Chief Executive Officer of CMS Energy-Consumers Energy resigned after

admitting that he had inflated sales totals by more than \$4.4 billion in so-called round-trip energy trades to deceive stockholders into believing CMS was worth more than its listed price. But stockholders could feel secure because Board Members had kept Billy on the staff to teach his replacement the tricks of the trade, according to [www.freep.com](http://www.freep.com) (5/24/02).

Chief executives set moral tone and cultural practices of any business, political, or social organization. Do we hold Governors, University Presidents, Legislators, and public agencies representing the health and welfare of the people responsible for honesty and decency in our democratic-republic? Who do you think will pull the switch for electrocution of your children or your family's health?

One might say, "Power Corrupts!" Gannet Newspapers, the Detroit-Ryder Newspapers, AP, and 25 commercial radio and television stations have denied their claim for a "free press" by failing to carry any stories that reveal the health risks of EMF, although their editors have been presented many such stories. After all, their communications systems contribute to the problem. They each have their own telecommunications website, internet, and cellular telephones. They all dump dirty electricity, which utilities like to call "noise," onto the utility's neutral, and it transfers into your home on the utilities ground wire. No one seems to be interested in cleaning it up, because they might have to hire a janitor (a knowledgeable electrician or electronics specialist) to clean it up, and that would cost money.

Only public awareness and legislative action, providing laws-with-teeth, will be effective. Obviously, "deregulation" does not work without personal and public integrity of those responsible. The favored utility executive statement, "No proof of harmful effects," is a myth based on inferior intelligence or failure to study facts, which is intended to keep us ignorant of truth.

Several states and other countries have enacted laws that are more stringent than permitted by the Congressional Federal Communications Act of 1996. Michigan could be a leader in setting realistic standards for EMF exposure because we have gained valuable experience on the home front, and much new research supports earlier studies of the harmful effects of EMF exposure.

Lotta Nilsson-Hedstrom, a member of Swedish Parliament, put it this way, "What's wrong? And what is my role as a law maker and elected official? Despite the wireless euphoria, it is my job to expose that people get sick from this new technology." Further, she stated, "Enough people know, a thousand times more than any theoretical research can tell them, why they have become sick. The disease may be called complex, psychosomatic, or multi-factorial. I know people who not only ask me to turn off my cell phone, but take it apart and carry it into another room before they can talk to me. They do not lie, they have not chosen to suffer."

The East Lansing-Okemos Courier, a Gannet paper, carried such a story about a young lady in Haslett, MI, who

could not answer the telephone because it affects her immune system and causes an allergic reaction. Of course, Gannet's story was about how this handicapped person had developed a successful business making and marketing doll-clothes; nothing about electrical dangers to others lurking in the electrical system.

Government health authorities of Sweden and Great Britain recognize electrical sensitivity is a physical health impairment and that people can suffer nausea, headaches, muscle pains, dizziness, irregular heart beat, and loss of memory when exposed to electromagnetic fields from cellular telephones, electricity pylons (transmission lines), computer screens, etc. Where have you seen or heard about electrosensitivity in the schools, colleges, or government agencies in the USA? Why Not?

**Opportunities for universities and qualified local investigators** (brains are not all in universities) to conduct new research, for economic development of safe practices, for regulatory agencies to sharpen their tools, for industries to employ new, safer technologies, to hire new competencies, for educational institutions to teach new and interesting concepts that can be demonstrated right in the class room.

Discovery of new electrical dimensions affecting health and life offers mitigation of chronic factors adversely affecting human and animal health. Relief can free some in the medical-health professions to concentrate on resolving other medical-mysteries; and investigators might be surprised how much they can learn about preventive medicine when EMF is controlled in the living environment of patients. Medical and insurance costs can be reduced, perhaps as much as fifty percent, as natural health improves.

Engineering and manufacturing industries will find new markets for innovations, and financial markets will be more stable because good ideas are based on truth. We can do better than we have been doing in Michigan, and now is the time to improve.

Learn about EMF from the utility's ground wire in the living room, and how it caused increased heart rate, blood pressure, cardiovascular disease, diabetes, and nonHodgkin's lymphoma to residents in East Lansing homes and elsewhere in the following pages!

## **Effects of EMF on Health of Residents in East Lansing, Michigan, Homes –**

Neighbors became concerned when Nextel Communications, Inc., applied to the City of East Lansing for permission to increase the size of their cellular telephone installation under the water tower and increase the number of antennae from 6 to 12 on top of the water tower in Patriarche Park. City officials had agreed to a contract for a price without notifying neighbors near the tower when it was installed four years earlier. Electricity from the Nextel ground wire and from ten homes and a school across the street from the tower was measured. Current was found to be excessive and was composed of 2<sup>nd</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, and 7<sup>th</sup> harmonics. These harmonics

had been associated with childhood leukemia in Denver, CO, and decreased milk production on dairy farms in Michigan, Wisconsin, Minnesota, and Virginia. Harmonics are whole number multiples of the 60 Hz AC frequency, i.e. 120 Hz = 2<sup>nd</sup> harmonic, 180 Hz = 3<sup>rd</sup> harmonic, 300 Hz = 5<sup>th</sup> harmonic, etc., and are known to cause heating in transformers and motors, to cause computers to crash and overheating of neutral wire circuits, and to cause fires (Kennedy, 2000).

Electric and magnetic fields were radiating above the living room floor from the utility ground wire running from the service entrance, the full length of the house where it was attached to the water pipe entering the basement from the City's water line. Utility engineers (Lansing Board of Water and Light) measured the voltage and current, from utility supply wires, the ground wire, and the electromagnetic field (EMF) radiated from the ground wire for 24 hours. They found 1.5 Amperes average with maximum 8.8 Amperes on the ground wire. The Rustrakmeter recorded 200% of Total Harmonic Distortion (THD) which exceeded the 5% standard with no more than 3% from any one harmonic for operation of electronic equipment recommended in IEEE 519-1992, by the IEEE (Institute of Electrical and Electronic Engineers). THD is a measure of power quality or "dirty" electricity on the power supply and was found to be related to peak-to-peak voltage spikes, the cause of high frequency electric "noise" on power supplies, that are ignored by utilities in Michigan, i.e., Consumers Energy, many REA Coops, and DTE (Detroit Edison). EMF exceeded 300 mG when measured at the ground wire in the home by utility engineers.

Electricity passing through the body from right leg to left arm was measured with oscilloscope leads attached with ECG patches while the subject was seated on the living room sofa with feet in the magnetic field on the floor. Electricity ranged from 118 to 288 millivolts, and 2.30 to 5.4 Amperes of current passing through the body during five 35 minute tests.

Heart rate and blood increased in proportion to the millivolts and amperes of current passing through the body as illustrated in Figure 1.

Induced current (Amperes) passing through the body was directly proportional to milliGauss intensity of the magnetic field measured on the living room floor above the ground wire; the correlation agreement was 97.1%.

In addition, an 836 megaHertz (MHz) signal, typical of the cellular phone output, was measured in the living room with an Agilent spectrum analyzer. Several radio frequency signals, i.e., 870 kHz, WKAR AM radio, 970, 1240, and 1320 kHz contributed to the THD noise on the ground wire and were

removed by adding resistive filters to the test circuit.

Another neighbor, house located 35 yards from the cell tower, was suffering from a fibrillating heart, a heart-valve was replaced about five years ago and a pace-maker was installed in his chest. The pace-maker was replaced after about five years and a defibrillator was installed to maintain a functional heart rhythm. His wife suffers from multiple sclerosis, a disease associated with scattered demyelination of nerve axons in the central nervous system affecting motor control. Myelin is the insulation coating of nerves that protects them from electrical interference.

The lady next door was suffering from nonHodgkin's lymphoma, a form of cancer associated with impaired lymphocytes, in tissues, blood, and bone marrow. Cytogenetic analysis indicated unusual breaks in the DNA and malformations of T-cells in the tissues and blood cells. Houses of three victims are within about 70 meters from the cell-phone signal generator-transmitter installation on the water tower. Regardless of the source, 8 of 10 houses surveyed had 100 mG or more, and two houses had 40 mG magnetic fields on the ground wire attached to the water line, using the Alpha Lab Trifield meter with maximum scale 100 mG.

Heart rate and blood pressure increase when the autonomic sympathetic neuroendocrine system is stimulated by various environmental stimulants such as heat stress, pain, loud noise, extreme cold, fear, or anxiety. The parasympathetic nervous system normally counter-balances the sympathetic nerves and stress hormones of pituitary and adrenal glands to maintain homeostasis. A dozen reports of changes in heart rate, heart rhythm, blood pressure and cardiovascular disease acquired during exposure to occupational EMF, and in laboratory controlled experiments, are in the bioelectric-medical literature (Hillman et al. 2006).

The average whole body current densities in the present experiment were 0.3 to 0.54 mA/cm<sup>2</sup>, apparently sufficient to cause ventricular fibrillation, and certainly adequate for

excitation of heart muscles and peripheral nerves (Reilly 1998). No references were found for heart excitation by mixed frequency EMF signals as occurs near the utility ground wires.

**NonHodgkin's Lymphoma** -- The lady next door exposed to electric fields of 150 V/m (5 to 7 mW/cm<sup>2</sup>) was receiving chemotherapy

treatment for recurring nonHodgkin's lymphoma cancer. Her experience compares to the highest 1/3 exposure indexed (level × time) of employees of Ontario Hydro who were exposed above threshold levels of 10 and 40 V/m electric

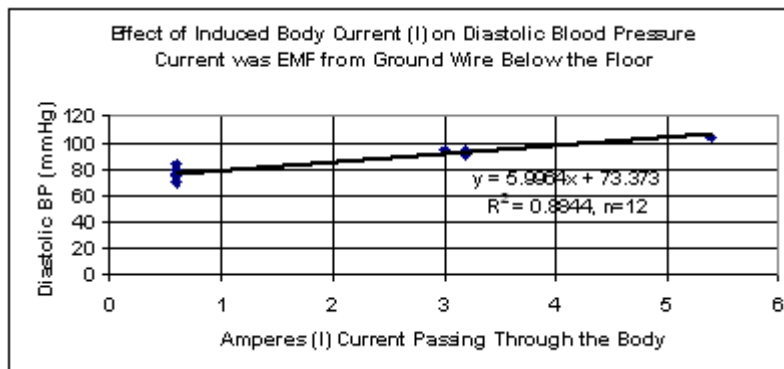


Figure 1.

fields and had 3 to 4 times greater risk of nonHodgkins’s lymphoma than office workers and executives who had little exposure.

**EMF and Diabetes** – The subject who had been sleeping in a chair above the ground wire became afflicted with diabetes. In other research, blood glucose of diabetics increased in direct proportion to millivolts of electricity at frequencies greater than 60 Hz measured at wall outlets in a home using a Graham/Stetzer Microsurge® Meter. Further, blood glucose and daily insulin requirements were reduced when G/S Filters were installed in wall outlets to reduce high frequency voltage from the power line (Havas and Stetzer 2004). The incidence of diabetes was higher among persons living near a power transmission line in Australia. Type I diabetes has genetic predisposition believed initiated by an environmental insult. New research indicates that EMF exposure attenuates insulin secretion, modifies the insulin molecule, and reduces the binding capacity to its receptors.

**Effects of EMF exposure on cancer** have been examined by epidemiological studies of humans and laboratory studies of animals. At least three major meta-analyses have been performed examining whether EMF is associated with childhood leukemia (Ahlbom et al., 1993; Greenland et al., 2000; and Wartenberg et al., 2001). Each of these studies has shown similar results: at exposure levels of 2 - 4 mG (0.2 to 0.4 µT) and above, the risk of childhood leukemia is statistically significantly increased as in Table 1 below.

Also, an apparent dose-dependent effect of EMF across these three meta-analyses shows that the risk of childhood leukemia increases with exposure thresholds increasing from 0.2 to 0.3 to 0.4 µT. This is important evidence supporting a “cause-and-effect” relationship, i.e., EMF causes leukemia in children. Secondly, the linear relationship indicates that the risk of childhood leukemia would increase in a continuous manner for each 0.1 µT increase in magnetic field strength as noted by Wartenberg et al., 2001. (1 mG (milliGauss) = 0.1 µT (microTesla).

## The Adverse Effects of Electric and Magnetic Fields on Human and Animal Health are Real!

### The Michigan Legislature Can Correct Most of the Problem—Some Places to Start:

1. Recognize that EMF from Overhead Lines, Cell Phone and RadioTransmitters Radiate EMF into the Living Environment, and proliferate chronic impairment of human health.
2. Require Electrical and Electronic Utilities to Monitor the Amount of Electric and Magnetic Fields that each is delivering into homes, schools, and

workplaces.

3. Establish reasonable State Standards for EMF Emissions into Specified Living areas of Homes, Schools, and Workplaces based on current scientific knowledge [See Power Line Regulation List].
4. Electrical Utilities and Electronic Utilities must Pay for the Cost of Monitoring and Reporting EMF Information to an Independent Electrical Health Institute which will analyze the data and recommend mitigation procedures as necessary.
5. Pass State Laws Requiring Utility participation in the Electrical Monitoring Program, and
6. Establish Penalties for Failure to Comply as has been legislated and adopted for the food industry.
7. Require Universities and All Publicly Funded Educational Institutions to Determine EMF Exposure of Students in various locations and laboratory situations and
8. Advise students about the Hazards and Health Risks of Various Electric and Electronic Devices, Appliances, Instruments, and Equipment used in homes, offices, laboratories, and workplaces as part of their Educational Process.
9. Provide STATE FUNDING for specific research investigations regarding effects of EMF on Animal and Human Health.
10. Require that Universities and State Agencies conducting research and regulatory functions uncouple themselves from the utilities about which they are supposedly studying and regulating. — STOP the Apparent Collusion and Misrepresentation of Vital Health-Related Exposure Information.
11. Demand that Public Agencies and Commissions, such as Michigan Public Service Commission and State Universities, Separate their Political and Personal Ambitions from their Public Responsibilities and Divest Themselves of Biased Utility Influences.
12. Do It Now! Avoid “Blue Ribbon” Study Committees That Provide No New Information and Cause Unnecessary Delays. Children’s and their families’ futures are being impaired, and Residents are Dying Because Utilities Have Failed to Act Responsibly.

**Table 1. Courtesy of Dr. David Carpenter, Professor, Environmental Health & Toxicology, Professor Biomedical Sciences, and Director, Institute of Health and Environment, School of Public Health, University of Albany, Rensselaer, NY (From Bell, Rabinowitz, Baum, Gerber and Carpenter, Testimony at the Connecticut Siting Council, Docket No. 272, March 16, 2004).**

| Study                   | Studies / # Subjects | Threshold | Increased Risk (OR)               |
|-------------------------|----------------------|-----------|-----------------------------------|
| Ahlbom et al, 1993      | 9 studies– 13,647    | 0.4 µT    | 2.0 (1.27-3.13), <i>P</i> = 0.002 |
| Greenland et al, 2000   | 12 studies           | 0.3 µT    | 1.83 (1.34-2.49)                  |
| Wartenberg, et al, 2001 | 14 studies– 9,697    | 0.2 µT    | 1.34 (1.07-1.67)                  |