

FCC 11-13

Before the:

**Federal Communications Commission
Washington, D.C. 20554**

In the Matter of:

Connect America Fund	WC Docket No. 10-90
A National Broadband Policy for Our Future	GN Docket No. 09-51
Establishing Just and Reasonable Rates for Local Exchange Carriers	WC Docket No. 07-135
High-Cost Universal Service Support	WC Docket No. 05-337
Developing an Unified Intercarrier Compensation Regime	CC Docket No. 01-92
Federal-State Joint Board on Universal Service	CC Docket No. 96-45
Lifeline and Link Up	WC Docket No. 03-109

**To: Office of the Secretary
Federal Communications Commission
Washington, DC 20554**

Comment Filed by: **Catherine Kleiber
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Date: April 18, 2011

Dear Secretary,

I am filing a motion to request an extension of time for comment. I do not believe that the time allotted to receive comments on the actions the FCC is proposing to take is sufficient. The implications of the proposed actions are far-reaching affecting availability of phone service nationwide, personal security, national security, energy efficiency, the environment, disabled persons (with and without radiofrequency sickness) protected by the Americans with Disabilities Act and public health. Extensive evaluations of the impacts of the proposed actions on all these

areas need to be made, submitted, and made public prior to the closure of the comment period. Without this information how can the public and affected parties possibly adequately comment on the proposed actions. Finally, the public and affected stakeholders, as mentioned above, should be made aware of the proposed actions instead of having action taken quickly and in relative secrecy.

It is extremely important that the FCC not take actions which will jeopardize the landline telephone system. The landline phone system is important to this country for many reasons. It is the most secure means of communication that is available on nationwide basis. All wireless technology is extremely vulnerable to interception and hacking by anyone in the area. The landline phone system provides security in communication during disasters and attacks. It is powered separately from the the utility grid, so landline telephone service is often available even when utility power is not. Cell towers, computers, and fiber optic lines are all down when the utility electrical grid is down. The landline phone system is environmentally friendly. The landline phone system takes only a fraction of the energy to have available and use that the cellphone and wireless computer networks do. In a time when we need to be conserving energy, we should be encouraging more people to switch to the landline network and away from the wireless technologies. I hope that the FCC will plan for our future and maintain the landline network, encourage use of the landline network, and discourage use of cellphones and wireless technology. Finally, a growing segment of the population in the United States has radiofrequency sickness and cannot use wireless technology for health reasons. Thus, any move to abandon the landline phone network would lead to further social isolation and exclusion from society in direct violation of the Americans with Disabilities Act.

Radiofrequency sickness is a functional impairment caused by overexposure to radiofrequencies, which includes the microwave frequencies used in wireless communication.^{1,2,3,4} Once one has radiofrequency sickness, exposure to radiofrequencies causes functional impairments which can range from frustrating to life-threatening.

I have radiofrequency sickness, diagnosed by the medical community as chronic fatigue syndrome. I become ill in environments polluted by radiofrequency signals of both transmitted and electrical origin. In the last couple of years it has become impossible for me to visit friends and family, go to libraries and other public buildings, travel or in general leave my sheltered home environment in the countryside due to the incredible proliferation of wireless technology and polluting electrical technology such as variable speed motors, compact fluorescent light bulbs, dimmer switches, etc. (Please see www.electricalpollution.com for more information.) In fact, I am unable to attend FCC hearings in person, just as we are unable to attend my sister-in-law's wedding later this week, because I can no longer fly, use public transportation, stay in a hotel, or indeed even be in most large cities (and many small towns) without becoming ill. We are also unable to go on vacation, or take our inquisitive sons to see the various places they would like to see (like the ocean, the mountains, museums, etc.) because WiFi and celltowers are everywhere, including campgrounds.

My symptoms vary depending on the particular frequencies involved, their amplitude, and the duration of my exposure. I often get a headache, brain-fog, short-term memory loss, scattered thinking, irritability, nerve pain, muscle weakness, heart palpitations, and appetite loss. If I have to stay in a polluted environment the symptoms intensify, becoming worse and lasting longer after I can finally leave.

I am not the only one in my family who is affected. My two young sons are also affected. They have lost their appetite and even vomited as a result of being in polluted environments. My older son, six, loses behavior control in response to transmitted communications signals. We have observed this effect particularly related to WiFi, transmitting utility meters, and cellphones. Polluted electrical environments evoke a similar response. The change in his behavior is quite dramatic. In unpolluted environments he is in control of himself, polite, logical, sweet and kind. In short, wonderful. In polluted environments, within a short time he starts becoming hyper and if we do not leave he becomes quite out of control, cannot listen to instructions, and behaves in ways that would normally be atypical.

My younger son, four, also experiences loss of behavior control. However, his response to transmitting utility meters is even more dramatic. Within a short time, he begins to act as though he has a major illness coming on, crying and begging to leave. Within minutes after leaving the polluted environment, he is no longer fussy or crying. This happened at Christmas, a time he would not normally want to leave his grandparents home, and has happened at other places and events since.

I am homeschooling both our sons because sending them to a school that is hazardous to them in both the short-term and long-term and where they will have difficulty learning well makes no sense. The presence of WiFi and a highly polluted electrical environment in the school are clearly preventing them from obtaining the safe public education that should legally be theirs.

I personally experienced serious cardiac effects from less than half an hour of exposure to WiFi from a laptop and a wireless mouse used by our crop insurance adjuster in our home. I was left with a rapid heartbeat and heart rhythm irregularities for two days. It is very important for you to understand how severe a problem this is. I had heart beat irregularities and a racing heart and yet I could not go to the hospital. If one WiFi ing laptop and wireless mouse could do this, what of the numerous WiFi ing laptops and sundry other wireless equipment at the hospital. This experience illustrates how nearly impossible it is becoming to conduct daily business and receive basic services. Since this reaction, I find that proximity to wireless technology sets my heart off again. This is truly a public health issue since I am not alone in experiencing this very serious effect of WiFi (pulsed microwave radiation). I have spoken with others who also experience serious cardiac reactions to it. The attached article "Getting off the WiFi Bandwagon" mentions that children are also experiencing cardiac symptoms from WiFi, including cardiac arrest.⁵

Obviously, our family cannot use wireless communication services. Our landline phone is an essential communication device for us. We use it for voice communication and for our internet service. Yes, we have dialup, not even DSL. We cannot get cable and we cannot use wireless internet options. There are not fiberoptic services widely available even within the municipalities in our area so that definitely is not an option here.

I am the webmaster of a website about radiofrequency sickness and electrical pollution. It is www.electricalpollution.com. As webmaster, I have received contacts from many individuals who also have radiofrequency sickness. With the proliferation of wireless technology, that number is increasing.

It is time for the FCC to end the charade. As you know, wireless technology was NOT safety tested prior to release. Safety has only been “proven” by continued industry and FCC insistence that the only way wireless technology can have any biological effect is through thermal or tissue heating effects. This is totally untrue. Disconnect by Devra Davis, an epidemiologist, discusses the coverup and research supporting non-thermal biological effects at great length. She also discusses research done years ago demonstrating the ability of pulsed microwave radiation to stop the heart.

In fact, data presented at the recent conference “Electromagnetic Radiation Impacts on Human Health” sponsored by The EMR Policy Institute showed that radiofrequencies, specifically pulsed modulated microwaves from a DECT cordless telephone base unit can have an instantaneous effect on heart rhythm in susceptible individuals. This technology is the same as that used by cellphones, WiFi internet access, and transmitting utility meters. See: <http://www.youtube.com/user/EMRPolicyInstitute> presentation of Prof. Magda Havas in three segments.

A number of studies show that electromagnetic radiation, including radiofrequency radiation, alters heart rate variability, blood pressure (including inducing hypertension with microwave exposure) and increases risk of arrhythmia related heart disease and heart attack.^{1,2,6}

There is extensive documentation in the literature of alterations of Ca²⁺ homeostasis.² This is likely to be responsible at least in part for the profound effects that radiofrequency radiation has on the heart and neurological function. Ca²⁺ regulates gap junction opening. Gap junctions are key in many intercellular communications.

Exposure to radiofrequency radiation also interferes with the action of enzymes, signaling pathways, and makes the immune system simultaneously hyperactive and less effective.^{2,7} Immune impairment results in part from the disruptive effect of radiofrequency radiation on calcium ion homeostasis. In addition to radiofrequency radiation-induced immune impairment increasing risk of various types of infection, it is likely to increase the risk of getting cancer from the DNA breakages radiofrequency radiation is well-documented to induce.⁸ While radiofrequency radiation is non-ionizing, the metabolic changes it can cause result in oxidative damage to DNA and subsequent breakage. Direct interactions between radiofrequency radiation and DNA can have similar results, as well as causing changes in gene transcription, through changes in electron flows induced by the radiation.⁸

Neurological function can be seriously impaired by radiofrequency radiation. Cholinesterase enzyme activity is impaired by exposure to radiofrequency radiation in a manner similar to impairment caused by organophosphate pesticides, often rendering a person with radiofrequency sickness particularly sensitive to small amounts of chemicals.⁴ Radiofrequency radiation can lower the pain threshold, slow reaction times, cause fatigue, muscle weakness, headaches, difficulty concentrating, short-term memory problems and even memory loss.^{1,3,9,10} These may be caused by disruption of Ca²⁺, disruption of various enzyme pathways, induction of the stress response and associated effects, increased permeability of the blood-brain barrier, or various other effects of over-exposure to radiofrequency radiation.^{1,2,4}

Radiofrequency radiation significantly decreases melatonin levels and decreases the ability of existing melatonin to fight cancer.²

Detrimental biological effects, distinct from tissue heating effects, have been extensively documented in studies at a range of different frequencies and at levels below the current United States safety standard.² Many other nations already have more rigorous safety standards than does the US. The European Parliament has voted to re-evaluate and reduce levels of exposure to transmitted radio and microwave frequencies due to the public health risk they pose. Microwave and radiofrequency radiation are now being associated with attention deficit disorder, autism, sleep disorders, multiple sclerosis, Alzheimer's disease and epilepsy, as well as asthma, diabetes, malignant melanoma, breast cancer, and other illnesses that have become increasingly more common. Please see www.bioinitiative.org* to read a 2007 review of the peer-reviewed science on the long-term risks of exposure to transmitted microwave and radio frequency radiation. Studies finding no health effects are predominantly industry funded.¹¹ A report by Hallberg and Johansson¹² published recently in *Pathophysiology* asks the provocative question about whether the recent (1997 and later) increase in exposure to microwave frequencies may be responsible for the recent decline in public health in Sweden. The data seem to say that public exposure to microwave frequencies is a likely culprit.

The Soviet Union performed large amounts of research and found biological effects at levels far below our "safety" guidelines.¹ Our current safety regulations are not designed to protect people from the non-thermal hazards posed by transmitting meters or other devices. The FCC "safety" guidelines are solely designed to protect a 6 ft 185 lb man from tissue heating during a short (6 minute) exposure. They are not designed to protect even a 6 ft man from biological effects during a continuous exposure.¹³ They are not designed to protect women, children, and smaller men even during short-term exposures and the exposure for the general population would be continuous, so these "safety" guidelines are meaningless for the population as a whole.¹⁴ Promoting technology which further increases the population and environmental exposure to microwave radiation does not make sense since an increasing number of studies show substantial detrimental effects.^{9,15} In continuing to stand behind them as "safety" guidelines, the FCC is complicit in injuring millions of Americans. Additional studies are now available. The data warrant establishing lower exposure standards for safe levels of exposure for chronic exposures to high frequency radiation for the population as a whole prior to increasing exposure in any way. To this end a moratorium on deploying new spectrum, new wireless technology, and installation of transmitting utility meters is necessary while biologically based standards are developed for all sources of exposure to radiofrequency signals, including wireless communications signals and high frequency electrical signals on building wiring - electrical pollution.

High frequency signals on power lines also cause radiofrequency sickness. Milham and Morgan found a dose-response relationship between high frequencies present on building wiring and cancer.¹⁶ Removing high frequencies on building wiring has improved MS symptoms, blood sugar levels, asthma, sleep quality, teacher health, headaches, ADD, and numerous other health problems.^{17,18,19}

* Sections of *The BioInitiative Report* was updated in 2009 and published in a special issue of the peer-reviewed journal *Pathophysiology* available at: http://www.sciencedirect.com/science?_ob=PublicationURL&_toctkey=%23TOC%235138%232009%23999839997%231345066%23FLA%23&_cdi=5138&_pubType=J&_auth=y&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=46db922ea4d2a2352e7490de7de6c785

Technical papers provide a solid electrical and biomolecular basis for these effects. A recent paper by Ozen showed that transients induce much stronger current density levels in the human body than does the powerline 60Hz signal.²⁰ Another technical paper discusses the authors' findings that high frequency communication signals on power lines also induce much stronger electrical currents in the human body than a low frequency signal of the same strength.²¹ The induced currents disturb normal intercellular communications. This causes harmful short-term and long-term effects.

Electrical engineering and biological sciences are largely separate disciplines. Biologists, molecular biologists, and doctors have been largely unaware of the high frequency pollution of the 60 Hz electrical signal we purchase. The assumption until recently by biologists was that the sine wave was pure. This is not so and has not been so for many many years. This has been well known by electrical engineers, but they have been taught that from a biological standpoint it is insignificant, after all the 60 Hz signal is 120 Volts and the pollution even in extreme cases usually does not amount to much more than 2 Volts and in many cases is measured in millivolts. However, again this assumption is proving not to be true, as the above mentioned references show. If proper standards are established, and the above mentioned references offer a good basis for establishing initial standards, non-polluting devices can be engineered.

Our experience and that of others strongly suggests that the proliferation of wireless technology and electrically polluting electrical technology is a serious public health threat that is likely to be behind many of the rapidly increasing public health problems such as multiple sclerosis, fibromyalgia, chronic fatigue syndrome, diabetes, asthma, allergies, migraines, ADD/ADHD, sleep disorders, etc. Please publicly acknowledge the inadequacy of the current thermally based safety guidelines and place a moratorium on installation of transmitting utility meters, additional spectrum allocation, and approval of new wireless technology while conservative biologically based safety guidelines for daily exposure to radiofrequency signals from both transmitters and electrical sources are developed. It is important that a public-health based standard be used for judging the science. The FDA and the Consumer Product Safety Commission also need to start allowing people to report health problems caused by wireless technology, including transmitting utility meters. The policy of disclaiming a problem because there is no evidence while refusing to gather and look at the evidence needs to stop.

Does the FCC want to go down in history as the industry shill that presided over the promotion of an energy inefficient, environmentally unfriendly technology and allowed the development of the largest public health crisis the modern world has seen? Or does it want to go down as the agency that weighed the environmental costs and picked the most environmentally friendly and public health conscious path while simultaneously protecting the civil rights of millions of Americans? I hope you will make the right choice.

Sincerely,

Catherine Kleiber

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