Comments on Notice of Inquiry, ET Docket No. 13-84

My daughter is sensitive to electromagnetic radiation (EMR) and suffers intolerable symptoms when exposed to EMR. Her life is being destroyed. Because of all the time it takes to help her find a place where she can exist, my retirement is being destroyed. Because of her need to move to a place where she can exist, our family closeness has been destroyed. In order to get away from the many sources of EMR in the city, she moved to an old farm house in the country. Then a cell phone tower a mile and a half away was activated, and that house was no longer habitable. Then she moved to another state where she thought she had found a habitable home.

Shortly after moving there, she was hit by the objectionable and intolerable noise and symptoms which seem to be associated with broadband on telephone lines (DSL) in rural areas. The August 20, 2013, comments by Mr. and Mrs. Gammone describe exactly what my daughter and some of her neighbors are experiencing. The only difference is the state and the names of the telephone and power companies. The noise the Gammones described, the physical symptoms, the problems and failures of electric appliances, the refusal of the telephone company, the power company, and government at all levels to do anything are all the same as what my daughter has experienced, but in another state. My daughter could have written the comments by Mr. and Mrs. Gammone. By way of this paragraph, I make their comments part of my comments.

My daughter and I spent thousands of dollars (now into the tens of thousands) on electricians, on moving costs, and incurred more thousands of dollars in real estate sales commission costs. And now we are on the search again. Her life is still difficult and limited.

Her home was an eight minute walk from my home. We often walked together for exercise after work. She liked to cook. Our families had Thanksgiving and Christmas dinners and some birthday celebrations at her home. Now she is hundreds of miles away at a place where we thought the EMR would be minimal, and we are on the search again because of the telephone DSL problem.

In December 2010 she began hearing disturbing noise at night and could not sleep. She also began having severe headaches, dizziness, confusion, fatigue, and sensations of burning in her legs. She cannot travel any farther than she can drive and return home in the same day, because she cannot risk having to spend a night in a hotel or motel that has WiFi in the rooms, and/or is in an area with cell phone towers. She cannot go to most public places because so many have either or both WiFi and cell phone tower emissions. Offices have WiFi and/or wireless computer networks.

At first, my daughter thought the symptoms might be from her house wiring. Her electrician had heard of such things. We spent $8,000 redoing most of the house wiring and paying electrical consultants to find the problem. The electric utility installed a new transformer, but had no knowledge to add. None of this made any difference. The symptoms continued. From an electrical engineering consultant, we learned that some of the symptoms could be associated with wiring errors that result in EMR which could be measured with a gauss meter, but if wiring was done in strict accordance with the National Electrical Code, that would not be a problem. Her house was ok in that respect, but it was our first knowledge that EMR could be a significant health problem. We had spent $8,000 unnecessarily, because no one seems to be informed about the hazards of FCC approved EMR.

Then she got a call from her doctor's office. They understood that people were experiencing such symptoms after smart meters were installed. The water company and the gas/electric company had installed smart meters in her basement without telling her what they were and without asking her permission to install EMR producing devices inside her house. At her request, the water company moved their meter to an underground vault at the curb. The gas/electric company, at the insistence of the Illinois Commerce Commission, removed their smart meters and installed manually read meters that do not broadcast. But that left the neighbors' smart meters broadcasting at her house.

During all of this, a near neighbor noted the many times the electrician's truck and numerous gas/electricity company trucks were at my daughter's house, and asked my daughter about it. My daughter told her the symptoms, and that they were trying to find the cause. The neighbor said they were having similar symptoms, and their young son had begun to have trouble doing his schoolwork. The neighbor's doctor had ordered an MRI for her, thinking she might have MS, but the results showed nothing. They tried what my daughter had been doing**:** sleep in the car in the countryside away from much of the EMR. They spent the summer sleeping in a tent in the yard of her parents' house in the country. When winter approached, they came back, spent a night in their house, and said "never again." They rented a basement in the country to spend the winter, sold their house, and then found a rental house in the country with minimal EMR. They were fine, and their son's schoolwork improved.

We called the Mayor and the City Manager. They said they are not allowed to even think about EMR: that the FCC regulates it. The City Inspections office knew nothing about it. The city/county Health Dept knew nothing about it and sent me to the State EPA. They knew nothing about it and sent me to the State Dept of Public Health.

A toxicologist in the Illinois Dept of Public Health**:** Division of Environmental Health told me that EMR was ruled out as a health problem years ago, and he sent me two old reports to document it. The reports were dated 1992 and 2002 from the National Institute of Environmental Health Sciences (NIEHS). They were about 60 Hz power line EMR and had nothing to do with the radio and microwave frequencies we are now being blasted with. They were mostly about cancer and leukemia. The reports pretty much concluded that because the evidence that power line EMR causes cancer or leukemia was weak, that EMR was not a health hazard. I think that such a conclusion is ridiculous at best, and better described as irresponsible or criminally negligent. If we use the NIEHS reasoning, carbon monoxide is not a health hazard because carbon monoxide does not cause cancer or leukemia. However, the NIEHS also concluded that "inexpensive and safe reductions in exposure should be encouraged." Instead, we have had an explosion of exposure to Electromagnetic Radiation (EMR), with the support and encouragement of the federal government, and often at taxpayers' expense.

A sharp rise in dementia and other neurological deaths.

My daughter's symptoms are neurological. Others who are sickened by EMR have similar neurological symptoms. A ***Science Daily*** article of May 10, 2013, titled "Brain Diseases Affecting More People and Starting Earlier Than Ever Before," calls our attention to a report published in the journal ***Public Health.*** The ***Science Daily*** article summarized the report as follows.

"Professor Colin Pritchard's latest research published in journal ***Public Health*** has found that the **sharp rise in dementia and other neurological deaths** in people under 74 cannot be put down to the fact that we are living longer. The rise is because a higher proportion of old people are being affected by such conditions – and what is really alarming, **it is starting earlier and affecting people under 55 years.** Of the 10 biggest Western countries the USA had the worst increase in all neurological deaths, **men up 66% and women 92% between 1979–2010."**

The article quoted Professor Pritchard**,** "These rises in neurological deaths, with the earlier onset of the dementias, are devastating for families and pose a considerable public health problem. It is NOT that we have more old people, but rather more older people have more brain disease than ever before, including Alzheimer's. For example there are two new British charities, The Young Parkinson's Society and Young Dementia UK, which are a grass-roots response to these rises. The need for such charities would have been inconceivable a little more than 30 years ago."

The article quoted Professor Pritchard on the cause of the increase of neurological deaths, "It cannot be genetic because the period is too short." The facts "indicate multiple environmental factors . . . the **explosion in electronic devices, rises in background non-ionising radiation – PC's, micro waves, TV's, mobile phones**, road and air transport up four-fold increasing background petro-chemical pollution; chemical additives to food etc." I think the EPA can tell us the USA has not had a huge increase in air pollution, and the FDA might be able to tell us that the USA has not had a huge increase in chemical additives to food. That leaves only the huge increase in EMR as the environmental factor associated with the increase of neurological deaths.

The Science Daily article is free on the Internet. The journal report is available at a charge on the Internet. http://www.publichealthjrnl.com/article/S0033-3506(12)00467-2/abstract

Instrument to measure the intensity of microwave frequency EMR

I am an engineer by education (Bachelor and Master of Science degrees in engineering) and by occupation (four decades doing and managing technical research). The source of my daughter's symptoms must be quantifiable. Because of the total lack of know how or assistance from government at all levels, I bought a microwave frequency meter that measures the power density (microwatts per square meter) of electromagnetic radiation in the frequency range of 800 MegaHertz to 2.5 GigaHertz which is the frequency range of so much of the objectionable radiation. The meter's antenna is directional; therefore one can use it as a pointer to the source.

The microwave meter readings showed that the gas and electric meters were each emitting an electromagnetic pulse every five minutes 24/7. That amounts to over 8,600 electromagnetic pulses a month from each. One of each is used for gas and electricity bills. The water meter was emitting an electromagnetic pulse every 14 seconds 24/7. That's over 185,600 EM pulses a month. Only one is used for our water bill. Obviously no thought had been given to the effect on the captive customers. They are monopolies. They have no competition. The FCC gives them a blank check to pollute the environment at their pleasure. The gas and electric meters broadcast the impulses to a collector atop a neighborhood power company pole. Each night after midnight, the collector broadcasts all the day's data to a cell phone tower about a mile away, again needlessly polluting the atmosphere with microwave radiation.

We counted seven cell phone towers, some with more than one tier of antennas, within about one mile of my daughter's home, one not much more than half that distance, all in a residential part of the city.

The microwave meter pointed us to EMR being emitted from the neighboring houses on both sides of my daughter's home. The houses had aluminum siding which blocks microwaves, and the microwave meter pointed us to the windows of the rooms which had their wireless routers or wireless modems. What right had they to emit EMR which pollutes my daughter's home? The FCC doesn't care. It's all about multi-million dollar salaries for CEO's of telecom and wireless companies. I see advertising for wireless boosters ($100) that will beam your wireless router to a receiver more than a mile away. Just what you need to attack the home and family of a neighbor you don't like. Approved by the FCC. In most cases the victims will not know what is making them so sick. Even if the victims know what is causing their symptoms, there is nothing the victims can do about it. Imagine calling the police to complain and the Mayor's and City Manager's offices say they are not allowed to even think about it? The FCC regulates it they say.

You use the internet to guess what FCC office to call. You get an answering machine. You leave a message and a day or two later you get a call back. They don't know who at the FCC deals with such things, and they guess at another FCC office that might know. You repeat the routine with that FCC office, and another, and another. If you are persistent, in a few weeks you get to the office of someone who tells you that the FCC does not respond to calls to actually regulate electromagnetic radiation in residential neighborhoods.

SBM-2008 Guidelines for EMR in sleeping areas

When I bought the microwave frequency meter mentioned above, I was made aware of the building biology evaluation guidelines for sleeping areas published by the German Institute of Building Biology + Ecology. The guidelines are SBM-2008. Whereas the FCC limits were based on mice and rats in the laboratory, and cells in a test tube or petri dish, the SBM-2008 guidelines were based on people and real life.
http://www.baubiologie.de/downloads/english/standard_questions_%202008.pdf

SBM-2008 states that the natural background radio frequency radiation is less than 0.000001 microWatt per square meter.

Their recommendations for sleeping areas are as follows:
Less than 0.1 microWatt per square meter – No concern

0.1 to 10 microWatts per square meter – Slight concern – As a precaution and especially with regard to sensitive and ill people, remediation should be carried out whenever it is possible.

10 to 1000 microWatts per square meter – Severe concern – Values in this category are not acceptable from a building biology point of view, they call for action. Remediation should be carried out soon. In addition to numerous case histories, scientific studies indicate biological effects and health problems within this reference range.

Above 1000 microWatts per square meter – Extreme concern – These values call for immediate and rigorous action. In this category international guidelines and recommendations for public and occupational exposures may be reached or even exceeded.

The above matched my findings. My daughter and her neighbor who was severely affected by EMR were comfortable with microwave meter readings at or near 0.1 microWatts per square meter. They expressed discomfort with readings near or above 1 or 2 microWatts per square meter. Above a reading of 7 or 8, the environment was not tolerable.

Water meter – At a ten foot distance, the EMR intensity was 100 to 200 microWatts per square meter. Intolerable.

Gas and electric meters – At a 20 foot distance, the EMR intensity was 30 to 90 microWatts per square meter. Intolerable.

Wireless modems and routers – The DSL technician installed a DSL modem about three feet from where my head would be when I used my computer. The EMR intensity was off the top of the meter, i.e., over 2000 microWatts per square meter. Because it was wired, we turned off the wireless capability, and the EMR intensity fell to essentially zero. A different DSL provider technician installed a DSL modem at the side of the head of the bed in my other daughter's house, because that was near where the telephone line entered the house. When told of the problem, she had it moved to the basement under a part of the first floor where people would not spend much time. Then she changed to a wired modem with the wireless capability turned off.

Cell phone towers – I took measurements of cell phone tower emissions at distances of 500 to 700 feet or more, and at a distance I would guess to be about a half mile. The intensity depends on the time of day and the day of the week. Typical readings at the shorter distances were 1500 to 2000 microWatts per square meter peak, and approximately half that rms. They could be higher, but the meter cannot read the emissions over 2000 microWatts per square meter. At the longer distance, the meter readings were 350 to 440 microWatts per square meter peak.

These measured cell phone tower emissions were a billion times the natural background EMR, and more than ten thousand times the SBM 2008 habitability limit for sleeping areas for sensitive people.

The FCC limit for continuous exposure of the general public is so high that it would take more than a thousand cell phone towers within a 500 or 600 foot radius to exceed the FCC limit. That would explain why the FCC refuses to respond to complaints of excessive EMR. The FCC limit is so lenient that it is impossible to exceed it in a residential area.

The FCC limits for the general public, continuous exposure

The FCC limits are published in NCRP Report No. 86 Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields, pages 279 through 283. It is available on the Internet – at a charge.

At a frequency of 800 MegaHertz, typical of much of the objectionable EMR, the FCC limit is 5,330,000 microWatts per square meter. That is five million, three hundred and thirty thousand microWatts per square meter.

It is 5.3 trillion times the natural background level of EMR Yes, that's trillion, not million or billion.

It is 53 million times the SBM 2008 recommendation for sleeping areas

Is it any wonder that people, especially children, have severe neurological symptoms? Perhaps resulting in dementias even for people who don't first have the early neurological symptoms?

The FCC limits are based on the theory that if the EMR is not proven to cause cancer, then it is safe. There is a difference between "safe" and living normally which the FCC and its "scientists" do not understand.

Mice and rats and cells in petri dishes and test tubes do not tell you they have severe headaches, feel dizzy, confused, fatigued, and have burning sensations in their legs. People do.

Immediate steps necessary to reduce the problem

Simply lowering the limits will not even begin to solve the problem. It is necessary to reduce the amount of EMR being thrown into our environment. Thousands of people are known to be suffering from the symptoms of EMR sickness. Some search for a place to avoid it. Others live on pain pills, sleeping pills, etc. Certainly there are far more than that suffering from the symptoms, spending money on doctors, tests, and prescriptions, and do not know the cause.

1. Smart Meters. They should be limited to one or two transmissions a month, not the unnecessary thousands of electromagnetic pulses that attack our bodies daily. Gas and water meters can live with one per month for billing purposes. Time-of-day billing for electricity can be accomplished easily by a simple chip that sorts use by incrementing two or three registers, each register representing the different time of day rates, and reporting the register readings once a month. Anyone who cannot figure that out should not be in the business. For readings when people move, only a few people are needed to take manual readings. These changes are a very small price to pay for reversing the onslaught of toxic radiation into everyone's home.

2.1. WiFi and wireless in homes. Cities should be empowered to make rules to deal with cases where home use of WiFi or any form of wireless in a home affects a neighboring home. The wireless provider should be required to provide information to the customer as to the possible hazards of wireless, information as to the advantages of wired installations, and how to disable the wireless feature of modems, routers, and computers (which may be continuously broadcasting in search of a signal).

2.2. WiFi and wireless in small offices and small businesses. The wireless provider should be required to provide information to the office or business as to the possible hazards of wireless, information as to the advantages of wired installations, and how to disable the wireless feature of modems, routers, and computers.

2.3. WiFi and wireless in schools. Should be banned until we have a better understanding of how this is affecting children, both in the short term and throughout their life. We cannot be planting the seeds of neurological problems in our children only to find out too late what we have done to them.

3. 1. Cell phone towers. Downloading movies or streaming movies or the Internet by way of cell phone towers should be banned. There are other ways of doing that by way of wires and/or fiber, i.e., either cable or telephone lines. Movies and the internet are mostly entertainment. Broadband is mostly entertainment. Entertainment should not be allowed to destroy the health and lives of people who don't even use it.

3. 2. Cell phones. All cell phones should be required to have easy and simple means, clearly labeled, to shut off transmissions, and simple instructions as to how to use it. On some cell phones, this is called "flight mode." Too many people think that turning a cell phone off stops the transmissions. It doesn't, the cell phone continues to communicate with the nearest tower. With a "flight mode" type of switch, when one enters an area, for example a doctor's office or waiting room, the sign to turn off cell phones would be meaningful.

4. 1. Overall. The habitability approach of SBM 2008 should become the criteria for residential areas.

4.2. Overall. The government must require the providers of wireless products to inform their customers of the hazards of their products. The food we buy at the grocery store has a detailed labeled with the contents and their nutritional values. Our prescriptions include a sheet of the side effects and warnings. Tobacco products have warning labels. It is past time for the wireless industry to do likewise.

Summary

The government is providing money to people who bought homes they could not afford, to keep them in their homes. At the same time, the government approves EMR and finances broadband that drive people out of homes they have paid for. This is insane. It is a violation of human rights. It is a government financed and government approved invasion of our homes. It is criminal. It must stop.

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Name of Filer	James C. Barton	**Author Name**	James C. Barton
Type of Filing	COMMENT	**Filing Status**	DISSEMINATED
Viewing Status	Unrestricted	**Exparte/Late Filed**	N
Total Pagecount	7		
Date Received	Sep 2, 2013	**Date Posted**	Sep 4, 2013
Address	417 W Lawndale Ave.	**City**	Peoria
		State	IL
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