

1635 4th Street
Bethlehem, PA 18020
September 24, 2018

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17105-3265

RECEIVED

SEP 24 2018

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

Re: Evangeline Hoffman-Lorah v. PPL Electric Utilities Corporation
Docket No. C-2018-2644957

Dear Secretary Chiavetta:

Enclosing is the Brief requested by Administrative Law Judge Elizabeth H. Barnes at the telephone hearing on August 17, 2018. A copy will also be sent to Attorney Devin Ryan. Additional copies will be furnished upon request.

Thank you for your attention in this matter.

Sincerely,



Evangeline Hoffman-Lorah

cc: Atty. Devin Ryan

Evangeline Hoffman-Lorah v. PPL Electric Utilities Corporation
Docket No. C- 2018-2644957

To: Commonwealth Of Pennsylvania
Pennsylvania Public Utility Commission
Office of Administrative Law Judge
400 North Street
Harrisburg, PA 17120

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SEP 24 2018

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

From: Evangeline Hoffman-Lorah
1635 4th Street
Bethlehem, PA 18020

Filed: September 24, 2018

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TABLE OF AUTHORITIES

Evidence of Defendant as Presented in Order

- C#1 Doctor's Report, D.O.S. 7/16/2018
Yevelson Internal Medicine, Dr. Stanley Yevelson
- C#2 Sandaura's Blog
<https://sandaura.wordpress.com/2011/03/23/a-constant-non-stop-low-frequency-hum-heard-in-my-home/>
- C#3 Sandaura's Blog
<https://sandaura.wordpress.com/german-study-confirms-hum-source-radiating-on-the-smart-grid-network/>
- C#4 Evidence is UNDENIABLE: Smart meters cause massive changes to the heart
<https://naturalnews.com/2018-07-25-evidence-is-undeniable-smart-meters-cause-massive-changes-to-the-heart.html>
- C#5 Smart Meter Personal Experiences
by Evangeline Hoffman-Lorah
- C#6 Statement by Timothy Lorah
- C#7 Statement by Nancy Lorah
- C#8 Doctor's Report, D.O.S. 2/19/2018 and 4/3/2018
Yevelson Internal Medicine, Dr. Stanley Yevelson
Doctor's Report, D.O.S. 3/20.2018
Head and Neck Center, Bethlehem, PA
- C#9 Review of Health Issues Related to Smart Meters
Monterey County Health Department, from FDA
- C#10 Toward Better Health: WHO: Smart Meters are Making People Ill
<https://mieuxprevenir.blogspot.com/2017/03/world-health-organization-smart-meters.html>
- C#11 World Health Organization
International EMF Project
- C#12 EMF Safety Network
<https://emfsafetynetwork.org/wireless-devices-potential-cancer-risk-says-world-health-organization/>

- C#13 American Cancer Society: Smart Meters**
<https://www.cancer.org/cancer/cancer-causes/radiation-exposure/smart-meters.html>
- C#14 FAQ: Radio-Frequency Radiation Issues/Stop Smart Meters**
[https:// stopsmartmeters.org/frequently-asked-questions/radio-frequency-radiation-issues/](https://stopsmartmeters.org/frequently-asked-questions/radio-frequency-radiation-issues/)
- C#15 Nerve disrupting frequencies radiating from “smart” meters**
Warren Woodward
- C#16 illustration with C#15**
- C#17 Radiofrequency Radiation: The Invisible Hazards of “Smart” Meters**
<https://globalresearch.ca/radiofrequency-radiation-the-invisible-hazards-of-smart-meters/26082>
- C#18 The Alarming Ways EMFs are Changing your Brain**
Deane Alban
- C#19 Smart Meter Health Complaints (partial list)**
<http://emfsafetynetwork.org/smart-meters/smart-meter-health-complaints/>
- C#20 Activist Post: Smart Meter Case Testimony before the PA PUC**
<https://www.activistpost.com/2016/11/smart-meter-case-testimony-pennsylvania-public-utility-commission-no-one-wants-to-acknowledge-emf-damage-p>
- C#21 Association of Tinnitus and Electromagnetic Hypersensitivity**
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2657824/>
- C#22 Natural Health: EKG proof - Smart meters damage your heart**
<https://www.naturalhealth365.com/smart-meters-emf-2266.html>
- C#23 AMI Smart Meter Politics**
Catherine J. Frompovich
- C#24 AMI Smart Meters ILLEGALLY Forced on Pennsylvania Consumers**
Catherine J. Frompovich
- C#25 World’s Leading Hackers Explain Why You Don’t Want Huge Tech Companies Controlling Everything in Your House**
<https://www.alternet.org/investigations/ef-con-25-hackers-deride-internet-things-internet-sht>
- C#26 Other Smart Meter Information**
<https://electricsenseinterviews101.com/emf-dangers-quiz1/>

STATEMENT OF FACTS

C#1 My problem is location specific, as evidenced by doctor on page 1, "...relates tinnitus had improved while vacationing in Maine -..." My symptoms decrease or disappear in rural areas or areas without smart meters (for example, they used to be non-existent in Port Clinton until some smart meters appeared there and all meters were replaced with smart meters in neighboring town of Hamburg, Berks County) and increase in proximity to installed smart meters. In fact, my symptoms began within 48 hours of installation in our neighborhood. (see also C#5)

C#2 I am not alone in my complaints; many others report a definite audible frequency emanating from smart meters and these frequencies can be measured. On page 2 it reads, "The noise is a by-product of the Radio Frequency interference, radiation and dirty power riding on the wires and radiating through every outlet in to your home, school, and workplace." The frequencies reported by sources paid by the utility companies are not accurate (page 3); in fact, the actual frequencies measured by independent sources are illegal according to FCC regulation (page 4): "...was confirmed by an acoustic engineer revealing the 217Hz is an illegal pure tone..."

C#3 As in my case, there is a direct correlation of the time period of smart meter installation and complaints of hearing a humming noise and complaints of physical maladies (page 1). The negative effects of these RF frequencies and ELF frequencies are medically proven (page 1). In fact (page 2): "...the European Parliament warned against the use of ELF frequencies..." This noise pollution has been proven to emanate from smart meters (pages 5-6) and is labeled "The Smart Grid Syndrome".

C#4 Smart meters have been proven to cause dramatically irregular EKG readings and negatively affect cardiac function.

C#5 My personal symptoms began within 48 hours of the installation of smart meters in our neighborhood and have worsened with prolonged exposure. I exhibited no indication of Electromagnetic Hypersensitivity before this time. Furthermore, my tinnitus and physical problems (including headaches, mental confusion, nausea, insomnia, heart palpitations, angina, pressure and vibrations in skull) worsen in close proximity to an installed smart meter. I have been to doctors (see also C#1, 8) who have ruled out any other possible causes. As documented, others in our family experience some of these symptoms, although my reactions are the most severe. My concern continually increases for the health of our youngest son who still resides at home.

C#6 My husband, Timothy Lorah, also hears a "ringing" in his ears which worsens in proximity to smart meters. He has also witnessed my struggle with EMF sensitivity; his observations were crucial to lead us to the cause of my afflictions.

C#7 My elderly mother-in-law, Nancy Lorah, in poor health and essentially home-bound, is also negatively affected by the smart meter installed in her home.

C#8 My family doctor, Dr. Stanley Yevelson, has diagnosed me with EMF exposure and voiced concerns about the placement of a smart meter on our home (page 2 D.O.S. 2/19/18): "I am concerned that placement of a "smart" or digital meter will exacerbate her current sx's (symptoms)." Dr. Yevelson states (page 2 D.O.S. 4/3/18), "Patient's history and clinical condition suggest chronic tinnitus mostly due to *Electromagnetic Hypersensitivity...*", therefore I have a positive medical diagnosis.

C#9 The FDA warns (page 1): "...about the potential for adverse health effects from radio frequency (RF) emissions from smart meters," and admits (page 2), "The association between adverse health outcomes and smart meters *has not been studied.*" No studies on smart meters have been done despite concerns that (page 3): "RF absorption by human beings may disrupt communication between human cells," and the postulation that, "...the effects of electromagnetic radiation on neuronal electrical activity," may include various adverse health outcomes (page 3). Reviewers call for the need for "longer term cohort studies" (page 3). The symptoms grouped into "electromagnetic hypersensitivity" on page 4 include most of my symptoms. This review to the FDA warns (page 4): "...it is important to recognize the plight of people suffering from these symptoms." Also, the World Health Organization in 2007 (page 5) recommended further studies be done (see also C# 10, 11). Many other countries and states have provided "alternative hard-wired meters" as an option for customers (page 5).

C#10 The World Health Organization classifies the radiation such as is emitted by smart meters as a "2B carcinogen" (page 1). The International Agency for Research on Cancer names RF radiation as "possibly carcinogenic to humans" (page 2). Electromagnetic Hypersensitivity is a world-recognized physical condition. Some people "...have or develop symptoms of physical distress in the presence of electro-magnetic or radio-frequency fields (or both)." (page 2) Symptoms listed by the EMF Safety Network (page 2) again are similar to my own.

C#11 In this 2012 report of WHO, it is clear that "smart meters will not be compulsory" (page 2) neither in the UK nor in much of Europe. Several European authorities recommend further research and risk assessment (pages 2, 3) before their implementation. In the WHO assessment of radiofrequency fields (page 4), the paper states that these fields emanating from smart meters are "possibly carcinogenic to humans, Class 2B." In the case of children (page 7), these concerns are especially alarming as "there are differences in RF absorption between adults and children." Although further study has been recommended by the WHO, no additional results have yet been published.

C#12 The WHO also voices concerns over the long-term health affects of exposure to smart meter radiation (page 2): "...these exposures might induce long-term health effects, ...particularly among young adults and children." There is an "increased risk for glioma, a malignant type of brain cancer" (page 2) with exposure to the type of radiation that smart meters produce. The WHO goes on to state (pages 2, 3), "...environmental exposures associated with transmission of signals for radio, television and wireless telecommunication," (such as used by the smart meter network) and that "the evidence, while still accumulating, is strong enough to support a conclusion and the 2B classification." IARC Director Christopher Wild says, "...it is important to take pragmatic measures to reduce exposure..." (page 3)

C#13 According to the American Cancer Society (page 1), “Concerns have been raised about the safety of smart meters, mainly because they give off the same kinds of radiofrequency (RF) waves as cell phones and Wi-Fi devices.” RF radiation is classified by the International Agency for Research on Cancer as “possibly carcinogenic to humans” (page 2). The WHO has promised a formal assessment but no report is yet available (page 2). Many states have the choice to opt in or out of having smart meters installed (page 3).

C#14 We have no control of the frequency, duration, or level of radiation coming to and from smart meters (page 1); in fact, we are being involuntary forced to use this technology without the option to turn it off, ever. The ranges in which smart meters operate are those of which health concern have previously been raised (pages 1, 2). The smart meter actual transmissions measured by independent agencies occur much more often than formal reports would lead us to believe (page 2): about 22,500 pulses per day for only one smart meter. Consider the affects of multiple smart meters (into the thousands or beyond) placed in any given area. Actual smart meter transmission exceed the safety period by over 10,000 (page 3). This increasingly causes reports of symptoms such as headaches, insomnia, and heart palpitations (page 4), as in my case.

C#15 Microwave radiation, such as the type emitting from smart meters, has already been proven to be unhealthy and disrupt nerve function.

C#16 This illustration of smart meter frequencies in the average home known to cause nerve block and impaired neurological function.

C#17 Smart meters are in violation of established safety limits. (page 1) “there is a great concern because exposure to microwave and radiowave radiation from these meters is involuntary and continuous. The transmitting meters may not even comply with FCC ‘safety’ standards.... There has been no public discussion.... There has been no testing of these meters for any kind of safety.” This is a fact despite reports of malfunctioning wireless equipment and appliances where smart meters have been installed (page 2). Actually, components of smart meters are “out of compliance” (page 2) with NEC regulations and therefore create a fire hazard. In addition, there have been reports of “excessive billing and inaccurate readings” (page 2). Smart meters have not been tested by Underwriters Laboratories (page 2). It is well known in the scientific community that frequencies over 33 Hz, of which smart meters are, “damage many aspects of our biology and our ability to think clearly.” (page 2) Also, concerns have been voiced over “privacy protection” and “violation of civil liberties” (page 3). In fact, there is no federal mandate, nor I have been shown any PA state mandate, which requires them. And no benefit of total energy use has been shown (page 3). According to top authorities, “The scientific evidence tells us that our safety standards are inadequate, and that we must protect ourselves from exposure to EMF...” (page 4) The medical concerns created by smart meter exposure have no cures and this “environmental toxin” may cause not only cancer, but a host of serious health problems including fertility problems, mental functions, and short-term memory disruption (page 4).

C#18 The WHO classifies smart meter radiation as a class 2B carcinogen and recommends we limit our exposure (page 1), although PPL currently gives us no option. Long term exposure side effects include Alzheimer's, brain tumors, and diabetes (page 1) plus sleep disturbances, tinnitus, cardiac ailments, thyroid problems, brain fog, and mental confusion (page 2).

C#19 This is a partial list of symptoms and complaints as the actual website contains too much information to list here. It is recommended that the original site is visited for complete testimonies. Many other people have problems similar to mine.

C#20 As with most things, it all comes down to dollars; follow the money trail. "RF/EMF microwave safety is not cost effective..." (page 2) Multiple studies have found "increased disability rates" and increased "childhood, testicular, and other cancers" (page 3) with RF exposure, although no steps are made to rectify the source of the problem. Consumers are being "harassed and threatened with no electric power" (page 4) for refusal of new smart meters although no problems have been reported with the original analog meters. The type of radiation the new smart meters produce is being recognized more and more as a health threat; in fact, "wi-fi is being removed from schools and hospitals." (page 5) Dr. Martha Herbert notices "parallels between EMF effects and autism physiology," ie, a worsening of the symptoms of autism (page 6). Smart meters impact children adversely (page 7). Still, we are forcibly subjected to their use despite the fact that "non-thermal effects are not well understood" and epidemiologists' studies conclude that "significant harmful biological effects occur from non-thermal RF exposure..." (page 7) It is important to realize that smart meters *do not comply* with the PA PUC Title 66/1501 *Utilities Not Harm Customers* (page 8). Again, the money trail leads to Chairman Robert Godshall of the PA House Consumer Affairs Committee, whose son is and/or has been an employee of PECO/Exelon, who has "sat on AMI Smart Meter opt-out bills for years" (page 9) due to his personal interests. He is "depriving all Pennsylvanians of due process... by not allowing said opt-out bills to be released for a vote..." (page 9) In fact, and I have been show no evidence to the contrary, the original bill passed is an *opt-in* bill. HB2200 states: "upon request from a customer that agrees to pay the cost of the smart meter at the time of the request." (page 11)

C#21 Tinnitus is more frequently reported in people also suffering from electromagnetic hypersensitivity, a recognized medical condition (page 1). EMF exposure causes other symptoms as well, such as dizziness and insomnia (page 2). As stated on page 4, "...electromagnetic hypersensitive patients had a higher EMF-complaint level and a worse sleep quality." More incidents of tinnitus are reported among those with EMF sensitivity (page 5). The fact that "... tinnitus is much more frequent in subjectively electromagnetic hypersensitive patients..." shows a strong correlation (page 7).

C#22 Studies have been conducted showing a "...corresponding - and drastic- alteration in ... EKG pattern," coinciding with momentary spikes of the smart meters (page 1). Dr. Gilberto Leon says (page 1), "...this type of reaction makes the heart work too hard, causing fatigued cardiac function..." The long-term implications are especially concerning. Also of concern are the "false readings" resulting in outrageous electric bills and dangerous side-affect of "arcing" which may lead to fires (page 2).

C# 23 Citizens of Pennsylvania have been “deprived of their U.S. and State Constitutional rights...” (page 1). The PA PUC’s “rabid enforcement” of the so-called smart meter law is an “over-reach” of its authority, since the original bill as passed was written as an “opt-in bill” (page 1). Despite personal research and multiple requests, written and verbal, to PPL’s lawyer, I have been unable to read the law for myself. For six years, House Consumer Affairs Committee Chairman Robert Godshall, because of his own personal monetary interests, has “refused to call all those opt-out bills for a vote.” (page 1) This alone should warrant an investigation “since AMI Smart Meters are not mandatory in federal law,” (page 2) according to Public Law 109-58 and the Energy Policy Act of 2005/1252 Smart Metering. In this way, the consumer is denied choice and subjected to unfair and illegal punishments for non-compliance with PPL also illegal demands.

C#24 The House bill SB2200/2807, “as passed by the PA Legislature, is/was an ‘opt IN’ bill.” (page 1) Any attempt to state otherwise is false and unfounded. What the PA PUC “.is enforcing totally different from, and contrary to, what the State Legislature actually passed.” (page 1) This charade continues despite the fact that “PECO really has not shown the FlexNet meters to be ‘safe’.” (page 3 beginning with “PECO Att. Watson”) The BURDEN OF PROOF remains with them. They deny proven negative health affects (page 4 beginning with “In general,”) of non-thermal radiation such as EMF sensitivity, tinnitus, blood-brain barrier leakage, depression, Alzheimer’s, glioma, and more (page 4). “32% of industry-sponsored studies found non-thermal effects... whereas non-industry-sponsored research found 70% adverse health effects.” (page 4) AMI smart meters have not been verified by the Underwriters Laboratories and are not proven safe for households; “furthermore, the new PECO smart meters do not have the safety features of analog meters...” (page 5 beginning “Frompovich, furthermore,”) Consumers are bombarded by radiation from all sides from the smart grid network which is called, “...an experiment on the human organism,” (page 6 beginning “Frompovich introduces”) as NO STUDIES HAVE EVER BEEN CONDUCTED. Independent sources confirm that the *actual* measurements of smart meter emissions are not what has been officially reported; the *actual* recordings put them in the 900-2400 megahertz range, in the RF part of the spectrum, which is concurrent to the formation of brain tumors and cardio-disruption (page 7 beginning “204 gigahertz”). Neglected is the fact that “Radiation is cumulative,” (page 7) and the levels and its effects are completed unknown. In short, the regulations currently being enforced by the PA PUC are not what the PA State Legislature voted into law and can not be forced upon us. Of great significance is PA State Senator Fumo on record in PA Senate Journal October 8 2008 (pages 2626-2631), stating, “In addition *we did not mandate smart meters, but we made them optional.*” (page 11 beginning “enforced due to”)

C#25 Smart meters are a network of devices capable of sending and receiving information wirelessly. As with all such technology, the potential exists for the possibility of hacking or leaking of information, thereby violating the consumer’s privacy and possibly endangering their personal information or well-being (page 3). There are no regulations for the security of the devices (page 3). In an experiment which was conducted, all routers were able to be hacked (page 4).

C#26 This new technology and its safety has not been sufficiently studied. With continued use, reported problems will increase, and PPL will be liable.

QUESTIONS PRESENTED

1. Are smart meters safe for our health and our properties? I have not seen any conclusive evidence presented by the defense; in fact, no studies have been conducted. Many authorities, such as the WHO and ACS, recommend further testing before these devices are widely used.
2. Is the article submitted by Dr. Christopher Davis (“Smart Meters and Routers Radiofrequency Disturbances Study...”) relevant? In fact, the article itself admits in the first sentence of page 1, “There is currently NO scientific literature that specifically examines electromagnetic interference (EMI) from Smart Meters or Routers...” On the eighth page (beginning “...the application as it is”), it actually states, “...it is widely recognized that individuals...need to be cautious about many sources of RF-emitting devices...” Also, the article never mentions electromagnetic hypersensitivity.
3. Will my medically diagnosed EMF sensitivity be exacerbated with the installation of a smart meter on our property? The doctor and I both agree that it will.
4. Is there a Pennsylvania state law mandating the installation of smart meters? Despite numerous written and verbal requests of Atty. Ryan, as well as my own research, I have yet to see the supposed law forcing consumers to use this technology. In fact, a PA Senator has gone on record stating that they are NOT mandated.
5. What guarantee do consumers have that of the accuracy of the smart meters and will they cause a price increase to electric utility bills? Again, despite several requests to Atty. Ryan, I have been given no information on this topic and certainly no guarantees. The Burden of Proof lies with PPL.

ARGUMENT

My family and I have personally experienced the negative effects of smart meters. There are *absolutely no studies which prove the safety of the non-thermal effects of these devices*. Having a medical diagnosis of electromagnetic hypersensitivity, it is certain that the installment of one on our property will further endanger my health. Also, long-term affects for adults and children are completely unknown.

I have yet to be shown any PA state law which mandates the use of these devices, and there is no federal ruling on the matter. Atty. Ryan did not fulfill his duties by neglecting to address my requests on this matter, even though I answered all his questions. Not only are PA consumers being illegally forced to use and pay for these things (as Sen. Fumo admitted the actual law passed did NOT mandate smart meters), we are being denied our Constitutional right to due process because of Chairman Godshall's refusal to bring opt-out measures to a vote, because of his personal conflicting interests.

Other requests for information not addressed by Atty. Ryan is the guarantee of the accuracy of new smart meters and the guarantee of no price increases as the result of their installment. Following installation, others have reported experiencing these problems.

My symptoms (such as tinnitus, angina, headaches, insomnia, fatigue, etc.) are location specific. I only experience them in areas where smart meters are in use. My symptoms improve when time and space allow me to be away from them. Also, I had no problems with my health until they were placed in my neighborhood. Other people in town and in our household can hear the audible vibrations emanating from them and have testified to that effect. With proximity and prolonged exposure, my symptoms worsen and my health deteriorates.

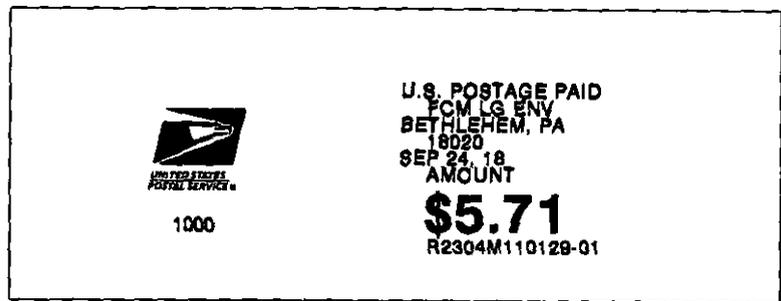
The types of radiation (RFs and EMFs) emitted by smart meters are already scientifically proven to be health risks, even carcinogenic. The measurements of these frequencies differ between utility-funded and independently paid sources, bringing into question any accuracy of the official information we are being told. In fact, the frequency and duration of their transmissions have been recorded as many times more than formal reports from utility company sources have admitted. Their frequencies may even be in violation of FCC regulation. Many authorities, including the WHO, want more studies to be performed. These same authorities also recommended limiting our exposure. By using this technology before the effects are truly understood, we are all essentially human 'guinea pigs'.

Other problems have been reported, such as the potential for fires caused by smart meters, as they *do not have the safe guards of the old analog meters*, and the possibility of being hacked, as they are simply computers sending and receiving wi-fi messages.

CONCLUSION

Therefore, in light of the above evidence, I am asking that no smart meter be installed on our property. Several of my concerns were not addressed. The safety of these devices has not been established. I have not been shown any law which requires them. The smart meters in our area are damaging my health in known ways and possibly harming all of us in ways yet to be manifested. If another meter is installed in our proximity, things will only get worse. The risks are not worthwhile and no benefits have been proven.

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