

From: smtprelay
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To: Statements
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Statement of Position Submitted

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Docket

E-7, Sub 1115 AND E-2 Sub 834

Message

In this comment I discuss some of the problems surrounding the Duke Energy smart meter rollout and possible ways to solve these problems. I also describe my own experience being harmed as a result of the local smart meter rollout. These 'smart' meters offer dubious benefits for the customer, while bringing adverse health effects, unwanted surveillance, and security threats (in addition to higher electricity bills, in some cases). Smart meters have also been the cause of many fires, over the course of their deployment. Whether these fires are from "improper installation", faulty components, or otherwise, it is an issue of concern that the smart meters were not sufficiently tested prior to deployment to prevent fire-related disasters. This carelessness clearly demonstrated by the utilities and the smart meter manufacturers, thus far, leads me to wonder what other problems could eventually surface from the obviously insufficiently-tested devices, such as the possibility of overheating and fire from metal-oxide varistors (inadequate surge protection), and the potential for RF to degrade the smart meter's inner workings (causing corrosion resulting in resistance, overheating and ultimately a fire). Although the utilities do have some overheating monitoring capacity, there is no alarm on the meter to warn the customer if the meter begins overheating. These topics were brought before the Maryland Public Service Commission in 2012; the comments from the meeting can be found at this online address: <https://skyvisionsolutions.files.wordpress.com/2014/08/comments-on-meter-fires-from-msma-final.pdf> The RF transmissions from a neighborhood full of smart meters contribute to a pulsing electrosmog ambience, inside and outside of every home. The RF levels in the area surrounding my residence are usually ranging from about .01 to .025 mW/m2 during the day, which are the same levels I find when I measure RF specifically from a smart meter, within a few feet of the device (inside or outside the house). These levels have been shown to cause depression, fatigue, gene mutation, reduced sperm count, and cardiovascular problems. I have also observed less frequent pulsing episodes, while taking measurements within twelve feet of the meter, with pulses ranging from .1 to .6 mW/m2, power intensities which have been linked to increased stress hormones, headaches, neurological problems, and cancer risk. These charts from the Bioinitiative website summarize many studies that report biological effects and adverse health effects from low-intensity RF emissions: <http://www.bioinitiative.org/report/wp-content/uploads/pdfs/BioInitiativeReport-RF-Color-Charts.pdf> The

smart meters also add dirty electricity to each home's household wiring, bringing problems such as fatigue, tinnitus, and the weakening of the nervous, immune, and endocrine systems. I do not have any means to measure voltage transients myself, but during my research online I found an example of smart meters doubling a home's dirty electricity, according to measurements taken with a Stetzer meter by Dr. Laura Pressley in an Austin, Texas residence. I understand that transients are a common occurrence with many household appliances; what makes the smart meter's additional transient emissions particularly harmful is the fact that the device is positioned at the root of all the branches of the household wiring, creating a well-distributed field of dirty electricity throughout the house. In addition, since every smart meter is of exactly the same design and construction, each switch mode power supply is emitting the same spectrum of voltage transients, which are all in phase with the 60 HZ of the power grid, and therefore in phase with each other, very likely creating an amplified version of that transient emission via the layering of the nearly identical pulses. The wiring of every house in the area can act as an antenna system transmitting these amplified pulses throughout the neighborhood. Again, I currently have no way to test for proof of this, but it is a possible scenario that should be considered by those who are in such a place to conduct testing, away from the populace, before allowing the deployment of devices that could create this kind of situation in the public domain. The transient emissions of smart meters were probably not analyzed in a real-world scenario with thousands operating at once, and the citizens have ended up being the test subjects in a potentially disastrous experiment. If you question whether dirty electricity is actually a health threat, I ask you to consider this study done concerning an unusual amount of cancer cases occurring in the teachers at a California school:

<http://www.sammilham.com/La%20Quinta%20Middle%20school%20teachers'%20cancers.pdf> Key quote: "The cancer incidence in the teachers at this school is unusually high and is strongly associated with high frequency voltage transients, which may be a universal carcinogen, similar to ionizing radiation." Mr. William S. Bathgate, a retired electrical engineer previously employed by Emerson Electric, testified before the Michigan House Energy Committee in February of 2018 on the topic of dirty electricity produced by both smart meters and opt-out meters. He explained how the smart and opt-out meters' switch mode power supply creates extra cost for the customer by injecting unusable voltage onto the wiring that the meter may count as billable energy usage. Mr. Bathgate presented a clear visual depiction of the voltage transients generated by an opt-out meter onto his household wiring (measurements taken with an oscilloscope). In addition, he explained how this problem could be easily avoided by adding an inexpensive EMC filter to the smart meter/opt-out meter's design. Video footage of the Bathgate testimony: <https://www.youtube.com/watch?v=xyaGntYM9WA> Written report that accompanies the Bathgate testimony: <https://mipsc.force.com/sfc/servlet.shepherd/version/download/068t0000001UX3MAAW> In addition to the health hazards described thus far, there is also the possibility of developing EMF sensitivity from exposure to the smart meter's RF emissions and dirty electricity. In extreme cases, people can lose their entire livelihood. This survey and analysis created by biochemist Richard Conrad, Ph.D, and Ed Friedman includes numerous testimonies from people who developed EMF sensitivity after a smart meter was installed on their home: <http://www.mainecoalitiontostopsmartmeters.org/wp-content/uploads/2013/02/Exhibit-D-Smart-Meter-Health-Effects-Report-w-AppendicesV3-1-9Reduced-Appendices.pdf> 210 completed surveys from the US, Canada, and Australia were received and used for analysis. Nearly 98% of respondents were very sure or fairly sure their new or worsened symptoms correlated to smart meter exposure. This document put together by retired US Government scientist Ronald M. Powell, Ph.D, features two similar surveys and corresponding analyses: <http://emfsafetynetwork.org/wp-content/uploads/2010/08/Symptoms-after-Exposure-to-Smart-Meter-Radiation.pdf> Data collected from 410 adults and children, in the US and Australia, is included in the surveys. Both surveys report new or worsened symptoms after exposure to the radiation from wireless smart meters in the respondent's environment. If a customer wishes to avoid the symptoms, or the possibility of developing symptoms, from exposure to the smart meter's RF and dirty electricity, they should be able to simply reject the device based on their personal experience and their own understanding of the studies that have clearly shown that such devices are a real threat to health and well-being, without being charged extra fees, and without having to bring an MD and a notary together to sign a document. Currently the only choice for opting out is to replace the smart meter with a smart meter in which the RF transmitter has been disabled. This replacement still creates significant dirty electricity in the household wiring. There needs to be an alternative that eliminates both the RF

and the dirty electricity hazards. The best option would be for Duke Energy to recall these devices and replace them with analog meters until they can come up with a way of gathering data from their customers without damaging their customers' health. Many customers are willing to purchase their own analog meters and pay for the installation. This should cause no issue for Duke Energy. Another option would be for Duke Energy to provide opt-out meters (RF transmitter disabled) that come equipped with an EMC filter for preventing voltage transients on the household wiring. If Duke Energy continues to require a signed document from a healthcare professional before allowing a customer to obtain an opt-out meter without penalty, they should agree to accept a signed document from any certified healthcare practitioner, including chiropractors, naturopaths, and acupuncturists, in addition to accepting documents signed by an MD. There should be no requirement for a notary to be present at the time of signing the document. I see no meaningful purpose for that requirement. The only reason people are tolerating these smart meters is a lack of information regarding the true nature of the device, and threats from the utility. I know that the emissions from the smart meter on my residence, as well as the ambient electrosmog in my local area that came as a result of the smart meter deployment in my neighborhood, caused me to become sensitive to EMF (and has caused, and is continuing to cause, damage to my immune, digestive, endocrine, reproductive, and nervous systems, with or without noticeable symptoms being present). This is my personal experience: A month ago, I began to suspect I was being sickened by RF emissions from a corded modem located ten feet away from my workspace. I took measurements with a Cornet ED88T and discovered it was true: the modem was pulsing several times a second at levels ranging from ~ 1 mW/m² to anywhere from 4 to 50 mW/m², directly into the space where I sit when I am working. I called the internet provider and had the wireless disabled. Immediately I felt relief from my usual workspace discomfort, which included cognitive problems, headaches, and queasiness. After a week, the ongoing pain and muscle constriction in my legs and ankles was greatly diminished and I am currently in the process of regaining my ability to walk normally, after being disabled for over a year. (Other members of the household reported immediate mood improvement, improved bowel function, and better sleep.) Note that these levels of wireless are considered "harmless" and incapable of causing biological effect, according to current FCC safety standards. Now that I know, from my own experience, what harm can be done by low-intensity RF, I do not find it hard to believe the studies that assert the RF coming from smart meters is toxic and capable of causing illness, exacerbating existing chronic conditions, and doing so in a way that can easily be misdiagnosed or blend in to a person's current set of health problems (including "old age"). One cannot help but notice the growing number of autoimmune and cancer cases, and it is not unreasonable to assume that the generally inescapable ambience of pulsing RF (and dirty electricity) is contributing mightily to this situation. I am sure it was exposure to the smart meter's emissions, both RF and dirty electricity, that intensified my sensitivity to the modem; before the smart meter was installed, 17 months ago, I was not noticeably troubled in my workspace. (Although now I believe that many of my ongoing chronic issues have been in part caused or exacerbated by my exposure to RF from that modem since I added it to my workspace a number of years ago. Until recently I was unaware that all modems from my ISP are provided with a wireless option set to 'on', whether or not they are corded.) I have no reason to believe that the wireless option in the modem was disabled prior to the smart meter's installation and was then suddenly activated because of the smart meter's presence; that makes no sense. What does make sense is this: the way I developed a noticeable sensitivity to a pre-existing source of RF in my workspace, after a smart meter was installed on my residence, lines up with the testimonies I have read from sources such as the ones I provided, sources providing clear evidence that the smart meter has the capacity to cause a person to develop EMF sensitivity symptoms immediately upon being exposed to its emissions or after several months of being exposed to its emissions, and with cumulative effects causing worsening of symptoms over time. I continue to have problems I did not have before the smart meter installation, such as worsened allergies and food sensitivities, and tinnitus, in spite of disabling the RF in the modem. I would like to try reducing my exposure to wireless emissions even further to see if my condition improves. For this purpose, it would be extremely helpful to have access to a meter option with both a disabled RF transmitter and an EMC filter to prevent voltage transients on the household wiring. Dr. Martin Pall, Professor Emeritus at Washington State University, has done extensive research concerning the effects of pulsed EMFs on biological organisms. His work has shown that low-intensity EMFs (including the type of RF pulses emitted by the smart meter) cause damage to biological organisms via the voltage gated calcium channel; the lower-frequency EMFs activate the

channel to open and allow too much calcium into the cell. Excessive intracellular calcium in response to EMF pulses causes a number of detrimental effects, including but not limited to DNA damage, oxidative stress, lowered fertility, neurological/neuropsychiatric effects, and cancer. This article by Dr. Martin Pall goes into detail about the topic: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3780531/> Dr. Martin Pall compiled a list of 170 reviews documenting various non-thermal health effects of EMFs. This list is not and is not intended to be a list of all important such reviews. However it gives some measure of the size of the literature that contradicts the industry contention that there are no non-thermal effects of microwave frequency EMFs: <http://electromagnetichealth.org/wp-content/uploads/2018/12/List-of-170-EMF-Review-Studies-M.-Pall.pdf> The U.S. National Institutes of Health National Toxicology Program has recently released its final report from a ten year study concerning cell phones and cancer: <http://www.sbwire.com/press-releases/clear-evidence-of-cancer-from-cell-phone-radiation-us-national-toxicology-program-releases-final-report-on-animal-study-1078348.htm> Key quote from Ronald Melnick, PhD, who led the design of the NTP study: "An important lesson that should be learned from this is we can no longer assume any current or future wireless technology is safe."

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