

Testimony of Linda K. in the

DTE Advanced (Smart) Meter Opt-Out Case, U-17053

What follows are the relevant portions of the testimony Linda K. offered in the DTE opt-out case, [U-17053](#). The judge refused to allow any of this health testimony, stating that it was impermissible because the only thing to be decided at the hearing was whether DTE's proposed radio-off smart meter opt-out fulfilled cost-of-service principles. An appeal has been filed an appeal with the Michigan Court of Appeals.

Since submission of this testimony, Linda has experienced worsening health problems as a result of continued exposure to smart meters in her community. At the end of this testimony, we have added information regarding her exposure to a radio-off (opt-out, nontransmitting) meter and how that 24/7 exposure for six days caused her to become sensitive to devices (such as cell phones) that previously had not give her problems (or at least no problems that she was aware of).

Q. What are your qualifications to testify?

A. I take my electric service from Detroit Edison. I have been affected by the smart meter installation in multiple ways: my health, my ability to earn an income, my ability to perform major activities of daily living as defined by the Americans with Disabilities Act, my ability to attend religious and spiritual services, my ability to access government services and health-care services. My health is negatively impacted by the nontransmitting digital meter Detroit Edison proposes as an alternative to the smart meter.

Q. What has your experience with smart meters been since your first encounter with them?

A. It has been terrible. There is the health aspect and then there is the social aspect.

Q. Tell us about the health aspect. What health effects have the smart meters had on you?

I will list them.

- Insomnia. If I am in a building with smart meters for more than about 15 minutes, I cannot sleep that night. Moreover, if I am in a building with smart meters for a half hour or more, or for short periods of time over several days, I am unable to sleep for several days.
- Heart palpitations. The same as with the insomnia, although I do not *always* experience the heart palpitations when exposed. However, when I do get them, they can go on for several days.
- Cognitive dysfunction. This is especially present when I am in a building that also has a lot of wireless in it already. I forget what I came to the store to get. If I am talking to someone, I cannot keep track of my thoughts. I have a thought, and then I cannot complete it. I want to think and I cannot. I forget words. It is like being old long before your time.

- Anxiety in my body. This isn't a mental anxiety—it is a physical feeling, *not* accompanied by anxious mental thoughts.
- Pressure in my head, as described above.
- Pressure in my body, as described above.
- Occasionally, headache or incipient migraine.
- Tinnitus, sometimes.

Inevitably, I get the insomnia. Inevitably, if in a building for more than 15–20 minutes, I get the cognitive dysfunction. Inevitably, if I am in a house for more than 5 minutes, I get the pressure and other weird sensations, as well as the agitation/anxiety in my body. If I am in a bigger building, it may take up to 10 minutes to feel these sensations, though it usually happens more quickly. And sometimes, especially if it's a house, I feel them the moment I cross the threshold.

I have sometimes been barely able to sleep for 3 days and have had heart palpitations for three days after being in a building with smart meters. My second encounter with smart meters occurred toward the end of June (June 22–23, 2012), when I was forced to be in buildings with smart meters for hours two days in a row. One of these encounters was at my doctor's office, again, where I did not know they had been installed. However, the moment I stepped over the threshold of the building, I could tell they were on the building. After the incident at my doctor's, I had heart palpitations for the next three days.

On top of all this, I have now become more sensitive to all sorts of electrical and wireless devices. This did not happen immediately. But now, there is hardly a building in Ann Arbor without a smart meter, so in order to do anything, I must be exposed to them. I have to get groceries, I have to do other errands. I do them as quickly as I can, but I cannot do everything in under 10 minutes. About a month ago, I began to notice that I was bothered by things that had never bothered me—the cordless phones in my home; sometimes the headset from my cell phone (the EMF travels up the wires); fluorescent lights in buildings that don't have smart meters on them, wireless in the Michigan League. With the fluorescent lights, I will feel the same agitation in my body and a very strong desire to leave the store immediately.

The effect on me is much, much worse in a home than, usually, in a big building. I assume that that is because the walls in a home are much closer to me--thus all the currents are closer to me and have greater impact. Also, the smart meters are way, way closer in a home. In one friend's house, if I stood in her kitchen, the meter would be five feet away from me, and that is standing as far away from it as possible.

Q. How do you know it's smart meters that are affecting your health?

A. It's obvious. When I step over the threshold of a building, I know whether there's a smart meter on the building because I can feel it. I feel all these weird sensations, like I've described above. Then, I don't sleep that night. And/or I get heart palpitations. And/or the other symptoms I've listed. Buildings that I was once fine in, one day I step inside, and it feels terrible. And so I know the smart meters have been installed.

Moreover, nothing else in my life has changed. When I heard about smart meters, I was concerned, but very hopeful that they would not bother me, since my cell phone did not bother me.

Q. Did you have these problems before smart meter installation?

A. Before smart meter installation, I rarely experienced insomnia. Poor sleep, yes; insomnia—very rarely.

Heart palpitations—I had a strange feeling in my heart many years ago, different than what I feel now. It was as if my heart were beating very fast. It lasted for a few days and never came back. This was different than what happens with smart meters.

Now that smart meters are everywhere in Ann Arbor, I sometimes feel strange sensations in my heart even when I have not been in a building with smart meters for a day or two. The first time I got that feeling was after being in my doctor's office and the other buildings.

Yesterday, I had to be in a building with smart meters, interviewing someone. I could feel the smart meter the moment I stepped over the threshold. I didn't in fact know whether this meter might be installed on this building, but I asked my interviewee. She said there was. I felt pressure like a vise around my head, and a weird vibration in my body. About 20 minutes into the interview, I was no longer able to think, to ask questions. With a lot of effort and time, I could make some headway, but only with some help from the person helping with the interview. I'd also like to add that this interviewee, like several other people I have interviewed who have positions of authority in the community—doctors, people with directorial or supervisory roles in government—have given an interview, then consulted with their attorneys and told me not to use their interviews. These are people who have been made sick by the smart meters and are also seeing the effects on the people they treat, provide services to, and/or supervise. They have been excited about providing information and being heard. Then, they consult an attorney and refuse to testify. Everyone is so afraid of DTE.

Pressure—no.

Bodily sensations of agitation—no.

Headaches or migraines—occasionally.

Tinnitus—I have had a very, very mild tinnitus at least since the age of 12, but not even enough to remark to the doctor about. However, with smart meters, I can have the kind of tinnitus that people normally describe: the buzzing isn't something so mildly in the background you barely notice it; it is front and center.

Q. When did you first notice that your health was affected by smart meters?

A. The first time I ever encountered a smart meter was sometime in June of 2012. Someone I knew peripherally invited me over to her house. I walked into the house, which was on Huron Street in Ann Arbor, and was nearly bowled over. It is really hard to describe the effects one feels from something like this because they are not sensations we experience in normal life and so we don't have good words for them. There was a way in which it was like being pressed upon from all sides, sort of like the pressure you feel when taking off really, really quickly in an airplane, the kind of pressure I imagine astronauts feel. That pressure was all over my body, though that particular type of pressure was probably slightly less in my head.

In my head, as I stood, and later sat, in that house, it felt like something would shoot in. Not like a shooting pain. It was wider than a pain, and it wasn't painful per se, though it was extremely unpleasant. It was as if what I can best describe as "empty rays" shooting through my head from time to time. Like two or three, and then it would stop for a while. It was really, really weird.

I found that my body was becoming agitated. It wasn't a mental agitation, per se, but an agitation of my body. It quickly became hard to think. I would lose my thoughts.

I can tell you more about what it was like, and this has been my experience in other houses with smart meters: It is like you are in the middle of a funnel cloud of electromagnetic current—you are encircled by these currents and can feel them. That is what is really weird about it. Then, on top of that feeling, these "empty rays" pass through your head from time to time. Like I said, these are wide, and sort of like a light beam in that they are kind-of empty inside. I know this sounds weird, but think of how science fiction writers describe things. This *is* science fiction. Science fiction writers have been incredible predictors of the developments of the future—and we are now living in some of that world.

Those "empty rays," when they pass through, it is like for a moment or two your thought processes stop. It is really weird, because it is so quick you know it's happening and yet you don't. If you have ever had general anesthesia administered, then you might have an inkling of what it is like. When they administer general anesthesia, you are fully present and then suddenly there is this huge blank space. When you get anesthesia, the blank space (the loss of consciousness) lasts for a long time—a half hour to several hours. With a smart meter, it is so brief. But it can happen repeatedly. And in that moment, you are blank. And aware a millisecond later that you *were* blank. It's very unsettling. You know it is happening—just like when you are coming out of anesthesia, or when they haven't administered enough—yet you can do nothing about it.

As I read more about the effects that smart meters can have on the human system, this experience made sense: It is interrupting the communication of the nerve cells in my central nervous system. As a biodynamic craniosacral therapist and a student of human anatomy and physiology, I learned, as we all did in school, that neurotransmission is an electrical and chemical phenomenon.

Q. You described being in a funnel cloud of electromagnetic radiation.

A. Yes. As time went on, it came to me that that is the best description, and, on my own, I figured out why. Later, as I did more reading, I found out that what I figured out on my own was exactly what any [electrical engineer or electrician](#) would tell you about what was happening. You see, in a home, you are surrounded by wires, encircled by them as they pass behind every wall. They are also often above you, in the ceiling, and below you, in the basement. And if you are in a house like that first house I was in, which was three stories, each tenant has their own electronic equipment on, pulling electricity through the house, and the funnel cloud is very, very high, much higher than in a ranch house. So in a multi-storied house, the effect—at least this is my experience—is increased. You feel like you're in a soup of vibration and also that suddenly, out of nowhere, a current will shoot transversely through your body. I couldn't figure out why there were these multiple sensations--vibration and these currents or rays. But then I learned that the *magnetic* part of the electromagnetic field runs at right angles to the electrical field. So you have these currents encircling you as you sit in a room (and probably running above you and below you to a usually lesser degree) and *in addition* to that electrical field encircling you, you have the magnetic field running perpendicularly out to you. I wonder whether the "empty rays" I felt are those magnetic fields or whether they are the radiofrequency hot spots from intersecting smart meter RF waves.

Now, please understand that I learned all this terminology after my first encounter with smart meters. You know, this is the interesting thing about science. In science, we *observe* phenomena. Then we seek to explain it. Despite what is commonly taught as how the scientific method works, most science is actually done inductively, not deductively. Thus, we observe phenomena, we seek to explain it. We don't waltz in with a theory and attempt to prove it. Here, the phenomena are these extraordinary sensations in the body and other physiological phenomena: momentary lapses of consciousness, tinnitus, agitation, inability to think, and so on. When I first felt them, I had no idea what was going on. But I could feel the sensations. Thus, I could ask the question, "What is causing this?" And the simple, but in some ways not terrifically informative answer is, "Smart meters." But *how* do they cause it? And that is where an understanding of how the currents work—the electric *and* the magnetic fields—comes in. Once you understand that, the seemingly crazy becomes explicable. Like gravity. None of us can see it, but all of us can feel it. And it exerts a powerful yet invisible force on our bodies.

That is part of why this sensitivity to EMF is so hard to grasp. You can't see electric fields. You can't see magnetic fields, either, though you can see how the magnetic fields operate if you get a magnet and some iron filings. It's so hard for anyone to believe that something you cannot see is wreaking havoc with your ability to think and sleep and your heart to function properly. I completely understand. I am very sensitive to these fields, but not as sensitive as some people I know, and when they say that they can feel something, for instance, effects from a cell phone tower, I feel a lot of skepticism. It's human nature to mistrust someone else's experience when we've never felt it. So I understand why people who can't feel it are skeptical

But remember this, we can't feel cancer, we can't feel the AIDS virus, we can't feel when we've swallowed a batch of E. coli, and most smokers don't feel bad when they smoke, yet *each one of those things is invisibly killing us*. We should have learned by now that just because we can't see it or can't feel

it doesn't mean it's not real. And just because we can't see or feel it doesn't mean it's safe! Someone who is contracting a sexually transmitted disease is probably feeling great while they are contracting it!

Q. Did you know there was a smart meter on the first house you encountered with a smart meter?

A. No, not when I went over there. Once I was in the house and felt all these terrific pressures and sensations, I asked if there was a smart meter on the house. I went outside and looked and saw *three* smart meters on the house. I had learned about smart meters a few weeks earlier. Someone I know peripherally had sent out an email talking about smart meters and how badly they were affecting her health. I didn't know if I would be affected, but I thought there was a chance. I didn't know what a smart meter looked like, but since these meters didn't look like my own meter and had a digital read-out, I assumed they were smart meters. Also, they had blue on them, which I later learned is characteristic of the Itron smart meters.

Q. Why did you think you might be affected?

In 2008, I was given a laptop computer. I was so excited. I would be able to do computer work outside or go to a coffee shop and cruise the Internet. I work out of my home, so to be able to go to a place where there were other people, or to be outside in nature, was important to me. Well, I went outside, turned the computer on (while holding it on my lap), and within a little bit of time began to feel a bit weird. By the time I'd been on that computer for a half hour, I was feeling strange, woozy, not able to think well. I persisted. "I'm not going to give in to this feeling," I thought.

Q. How did you know it was the laptop?

A. Well, it was pretty obvious. I turned it on, and in less than half an hour I felt ways I'd never felt before. I was so frustrated. I also knew why I was likely feeling this way. I'd had a client the month before, a young guy, college student, who had come to me for craniosacral therapy. He told me he couldn't use his computer, couldn't use his cell phone, couldn't even watch TV. At first, it was just that he couldn't use the computer, but then it was all these different electronic devices. He said it was called *electromagnetic sensitivity*. Since I'd just been in a study group with someone who'd mentioned learning about this type of thing, I had an inkling of what he was talking about and didn't think he was coming from out of left field. But not in a million years did I think I would have that problem! I thought it was sad for him.

Q. So how did you resolve the problem with your laptop?

A. I called the place I got the computer from. The guy told me how to shut the wireless off. I was so bummed! I did it. It was slightly better, but still impossible for me to use this \$1000 computer that could not be returned!

So, I talked to the guy again, and he told me to try taking the wireless card out. I did that, and I can use the computer just fine. And, in fact, the LED screen is a thousand times better than the CRT screen I had

before, which would make me exhausted. This screen doesn't tire me out to the same extent—less flicker, less dirty electricity, all that. Everyone knows CRTs are much harder on you, just like fluorescent lights.

Q. Do you experience problems with other wireless or electrical devices?

A. Some, but not all. Wireless in a room, at least before the installation of smart meters, was not a problem for me. Like many people, I went to coffee shops to work on my computer, and there is wireless at all of them. Perhaps I was affected in some kind of way (and from what I have now learned about the hidden, unfelt effects of RF radiation on the human body, I probably have been), but it was not anything I could directly feel.

Dimmer switches have always bothered me. I can hear the buzz if they are not turned all the way up, and they make me feel weird if they are not turned all the way up. I feel that agitation I described earlier.

Most CFLs I cannot stand, though certain ones I can tolerate.

Fluorescent lights exhaust me, like they do many people, if I am under them for a few hours, but, prior to the installation of smart meters, I could not *feel* anything from most of them. It's just that I would be fatigued after being around them.

My cell phone does not bother me, at least not now. We have measured the RF output from it, and it is extraordinarily low. It is an old phone by today's standards—a 2008 model. But I never put it to my ear—I use a headset and I often keep it shut off unless using it. Except for when I am walking, I do not carry it next to my body.

But here is the clincher. When I received the laptop, I also got a wireless router, of course. I never used it, never even opened the box because of that initial experience outside. But earlier this year, I needed a router. I called the computer store, and the guy told me I wouldn't have any problem with the router. I wasn't too sure about that, but he was, so I decided to try it. I plugged it into the wall and *immediately* I felt something happen to my heart. Unbelievably scary—like it was being penetrated by a current, by something that would twist it—right where the aorta enters the heart. I pulled the plug immediately.

Also highly relevant, when I walked into Best Buy a few years ago, I felt all sorts of strange sensations—a lot of things like I feel now with the smart meters. I couldn't really figure it out, but came to the conclusion that they must have added wireless throughout the store and that was what had changed. That made me a little concerned, because I knew that many coffee shops, at that time, were adding wireless, but I didn't have those sensations anywhere else. I figured that the amount and density of computer and stereo equipment in that store must be what made the difference. I now suspect that the switched-mode power supplies in the equipment, combined with extremely strong wireless, were what caused these feelings. I could barely stand to be in there, and from then on, I never went to Best Buy unless I absolutely had to buy something, and I got in and out as quickly as I could. But I didn't worry about it per se, I just figured it was Best Buy, since I didn't experience these things anywhere else.

Similarly, but to a lesser extent, when I went to Ace Hardware on Stadium Boulevard a couple of years ago, or maybe only a year ago, I noticed something different. I would get 15, maybe 20, feet away from the checkout counters, and I would feel strange and uncomfortable. Not the same way as in Best Buy, and certainly not as intense, but something along the same lines. I didn't like it at all. I was fine in the rest of the store. I noticed all the clerks were walking around with headsets. I figured it must be the wireless current. I didn't know much about that sort of thing then.

Oh, and once that happened, after a few months, the things you swipe your credit card through--in some stores--specifically, Whole Foods and Ace Hardware--those card readers started to bother me when I was close to them. There was this incredible intensity that came out of them. I think both Whole Foods and Ace changed their card readers, because at some point this year, they didn't bother me anymore. And note: I wasn't bothered at any other store, so clearly what is transmitted through some is not transmitted through others.

Finally, I have a new washing machine, bought in June. It's computerized. Every time I press the buttons, I feel jolts in my head. It's a quick click, as fast as the push of a button. This would have been unbelievable to me, but by the time I had this experience, I had read about voltage transients, so at least I knew what was going on. What I do in order to be able to use the machine is put the lid up to block the control panel. Then I bend down so I'm at the same level as the lid to keep the current from hitting me. I have to count the number of times to punch each button so that I can do it without seeing. Yeah, it sounds crazy, but it's true. And it makes sense, because the thick metal of the lid blocks most of the rays.

Q. You live near a cell phone tower. Does that bother you?

A. I live 1000 feet from a huge cell phone tower. When I first noticed it, quite a few years ago, I got worried, because I'd heard that they could be bad for your health, but I realized that nothing felt different to me. I was still sleeping okay, too. I think this is really important: The utilities tell us that smart meters aren't bad for us, yet I am terribly affected by them, can feel them throughout my body, they give me insomnia and heart palpitations, yet I can live next to a cell phone tower for years and not feel these strange sensations nor have these *palpable* health effects (it may be affecting my health, but I cannot *feel* it).

Q. Have the health effects you experience as a result of smart meters affected your ability to work and earn a living? If the answer is yes, describe how.

A. Yes. I work for myself as a biodynamic craniosacral therapist and massage therapist, and I edit a journal. It affects my fatigue level and thus my competence and productivity; I cannot take a job outside the home; I cannot keep up my continuing education credits and thus my license.

When I have been unable to sleep because of smart meters, I cannot do editing. When I am unable to sleep because of smart meters, I am not as good a therapist as I can be. Furthermore, business this summer slowed considerably. I began to consider seeking work elsewhere, perhaps partnering with

another health-care practitioner, and realized that with the deployment of smart meters, this was an impossibility. There is absolutely no way that I can work in a building with smart meters. I can't be in a building with smart meters long enough to get a massage, let alone long enough to give them all day!

Because of the deployment of smart meters, I was unable to attend my biannual biodynamic craniosacral therapy conference in Maryland. I was so looking forward to this educational and networking opportunity, especially because I am past president of the association and its current journal editor. But in early September, I found out that smart meters had been deployed in Maryland and I knew they were likely installed at the conference site. Which they were. Part of my compensation as journal editor is that my expenses to, from, and at the conference are paid for. I was unable to attend. I suspect that I will never be able to attend a conference again. Not only will I not receive this compensation that I am owed (at this point, the equivalent of \$5000), my ability to earn an income is severely limited because I will not be able to keep up with developments in the field. BCST is a hands-on work. It is not a skill that can be learned from reading books or taking a course online.

Furthermore, I had begun taking workshops on Hellinger work, which is a type of therapy I can use as an adjunct in my work. Because smart meters have been deployed at the Ann Arbor location where these workshops are held, I can no longer learn this modality. Like BCST, it is a work that must be learned in-person collaboration with others.

Moreover, each year, I attend the annual Polarity Therapy conference here in Ann Arbor. I also practice Polarity Therapy. The building where those workshops are held has also been smart metered, and I will never be able to attend the conference again. There is no way that I can spend 3 hours a day in a smart metered building, let alone 8 hours a day for 4 or 5 days.

I will be unable to keep my massage therapy license because of this. To be completely clear: Michigan has passed massage therapist licensing. No licenses have been issued yet, but as of November 2009, all massage therapists who wish to be licensed must be getting continuing education credits. These credits include the modalities listed above, as well as massage therapy courses, which I also attend. I can no longer get these credits.

So what am I to do? Stop practicing? Go on welfare? Flout the law and hope I don't get caught?

Q. Have the health effects you experience as a result of smart meters affected your ability to interact socially with others? If the answer is yes, describe how.

A. My social life has dwindled to nearly nothing. I am unable to be in the home of any friend because every friend has a smart meter on their home. I cannot meet a friend for dinner, go to a movie.

Earlier this year, I joined a number of great Meetup groups. These are social groups where people with similar interests get together weekly, monthly, perhaps a few times a week. I was having a great time with the Film Fans, the Game-Playing Group, and others. I had to quit every one of those groups because of smart meter installation.

There is another group I belong to that meets in the winter and spring. I just realized that I am not going to be able to attend that group anymore. I am not going to be able to go to the annual Christmas party for the spiritual center I was a part of until the installation of smart meters made it impossible for me to attend functions at the center.

You know, I shop at a co-op, and I used to eat there, hang out there, work on my computer there. It's a social hub in Ann Arbor. I can be certain that I'll see someone I know at least every other time I go there. I can chat. Have a conversation. Catch up with people I wouldn't otherwise see. All that's over. I have to get in and get out, or I pay for it by not sleeping for the next one or two days.

Have the health effects you experience as a result of smart meters affected your ability to access public services, such as the public library, government offices? If the answer is yes, describe how.

Yes. I love going to the library, especially browsing the book sale. I was so grateful that I was still able to go to the library. Then, one day a couple months ago or so, I walked into the library and knew it had been smart metered. The cognitive dysfunction, the weird feelings in my body, incipient headaches. It wasn't quite as bad in the basement, where the book sales are held, but the last time I went there, it was really, really bad in the basement.

So now, I get in and get out. I can't browse. And libraries are for browsing.

If I wish to speak to my city council on any issue, including the smart meter issue, I have to weigh the ill effects on my health vs the possibility that my words will have an influence. I have attended council and environmental and Washtenaw County Commission meetings several times in the last year on a variety of issues, but if I do now, I will wind up not sleeping for one to two nights and experience the cognitive dysfunction, etc. I have already discussed..

Q. Have the health effects you experience as a result of smart meters affected your ability to freely assemble outside? If the answer is yes, describe how.

Yes. There are several places in Ann Arbor that I cannot tolerate being because of the incredibly high RF in those areas. This includes parts of Washington and Liberty Streets, where marches often take place.

Q. Have the health effects you experience as a result of smart meters affected your ability to access religious or spiritual services? If the answer is yes, describe how.

A. They have utterly affected it. I can no longer attend talks or services at the center I once went to. I want to explore several other religious/spiritual communities in Ann Arbor, and also attend talks, but now I cannot. If a friend dies, how will I attend their funeral? One friend died in April of this year. At least there were no smart meters then, and I could attend his wake.

The monthly spiritual group I am a part of can now meet only at my home or the home of one woman whose home has not yet been installed. Soon we will be able to meet only at my home. It was important to people to rotate the gatherings, but we will no longer be able to do that unless I drop out.

My spiritual life is very important to me, and an integral part of the work I do as a therapist. Yet one more avenue of self-realization, community, and education has been cut off from me due to smart meter installation.

Q. Have the health effects you experience as a result of smart meters affected your ability to freely access health services? If the answer is yes, describe how.

A. Yes. I told you about my experience at my doctor's. Recently, I needed to see my doctor again. I called the clinic and explained that I could *not* be in their building and wanted a referral to the specialist I needed to see. They refused, and said I had to come in. I waited out in my car, freezing, for one hour before they called me for my appointment (they were an hour late). Then, I had to be in that doctor's office, which is one of the worst buildings I have been in, for one hour for my appointment. I have pre-cancerous lesions on my face, hands, and legs. I had a choice: ignore them and potentially have them turn cancerous (I grew up in Arizona, and my sister has already had a malignant growth removed from her neck), or deal with the effects of the smart meters on my health.

I have visits to St. Joseph's Hospital in Ann Arbor once every three weeks for my Ehlers-Danlos. Once that building is smart metered, I don't know what I will do!

Q. Have the health effects you experience as a result of smart meters affected your ability to perform one or more major life activities not already mentioned? If the answer is yes, describe what activities and how the effects have affected your performance of these activities.

A. Yes.

Caring for myself. Going to the grocery store. Buying necessary clothing. Banking—once smart meters were installed at my bank (and I could feel it the moment I walked into the bank), I got an ATM card. I prefer to do all my banking with a person, not a machine, and had not had an ATM card for years, but got one the day I walked into the bank and could feel the smart meters. Getting my hair cut. Buying necessary materials for remodeling and maintaining my home.

Browsing a store.

Learning—both because I cannot attend the educational functions I need to and because of the cognitive dysfunction that inevitably occurs when exposed to smart meters for whatever reason. Furthermore, once I am exhausted and have insomnia because of smart meter exposure, I cannot think or learn.

Thinking—as described above.

Sleeping—as described above.

Interacting with others—as described above.

Reading—when exhausted, I cannot.

Concentrating—as described above.

Q. DTE has asked the Commission for approval of a plan that would not allow anyone to keep their analog meter. Instead, those choosing to opt out of smart meter installation, if an opt-out is instituted, will be forced to take a nontransmitting digital meter on their house. Have you had experience with the nontransmitting digital meter?

A. Yes.

Q. What was that experience like?

A. The nontransmitting digital meter makes me feel *horrible!* I was hopeful that when I went over to someone's house who had a digital meter that I would not be affected. I thought I *might* be, but I certainly did not expect what I encountered. I stepped over her threshold and my ears began ringing immediately. That is the first time that had ever happened to me. At that point, I had not experienced that with a smart meter. My body felt like it was buzzing. I could not stand to be in her house. It was every bit as awful as the smart meter. The only difference was, I did not feel those "empty rays." I left that house after about 7 minutes. I couldn't stand it.

I was over there briefly one other time. I felt the same awful sensations in my body.

I experience many of the same physiological changes (anxiety sensations, which are due to cortisol, etc.) as with a smart meter. I cannot say whether they digital meter will cause me insomnia because I have never stayed in a house with a nontransmitting digital meter long enough to know whether that's a problem.

Several weeks after my experience with the digital meter the first time, I was at that same home a second time, again briefly, and experienced the same sensations as well as a pressure through my body.

Q. In your experience, will the nontransmitting digital meter solve the health problems you experience with smart meters?

A. No.

Q. Are the nontransmitting digital meters an acceptable alternative to the smart meter?

A. No, because they will not solve the health problems I and others experience. It is very clear to me from my personal experience that smart meters and digital meters—at least the new, nontransmitting digital meters—cause many of the same health effects. I had no idea of this when I began investigating smart meters. I thought the problems with smart meters were solely because of the RF (radiofrequency) radiation. It was months before I came across information about switched-mode power supplies and how they might also harm health. Switched mode power supplies step the 240 volts coming off the power line down to 4–10 volts to run the switched-mode power supply (SMPS). Analog meters don't need SMPS because analog meters don't need electricity to run.

The site I came across said *nothing* about how horrible the digital meters make you feel. They just cautioned that they might be harmful to health. It made you think about it in the same way you think about other things that we are cautioned are harmful to our health—you think, “Well, maybe it’s a little bit harmful, but what isn’t in this day in age?”

My experience in the house with the nontransmitting digital meter made it very clear to me that there is a lot of similarity between the smart meters and the new digital meter and that a huge portion of what I and others experience is due (at least in part, if not solely) to the voltage transients generated by the switched-mode power supplies.

I also want to emphasize very strongly that I have been in a house with an *old* digital meter, a digital meter that can’t be converted to a smart meter. It was put on the house about 4 years ago. Being in that house is no different than being in my own home. The old digital meter is nothing like the new one. It is an entirely different experience!

Is there anything else you wish to say about how smart meters have affected your ability to perform major or minor activities of daily living?

Nothing except to say that smart meters have basically ruined my life. I have to live like a hermit, even though I am living in a city. I can’t do any pleasurable thing anymore that involves anything outside of my home other than walking through the woods.

Moreover, with the near completion of smart meter installation in Ann Arbor in the last month—and therefore my inability to have a respite in any grocery store—I seem to have become more sensitive to every sort of electrical field. I am very afraid that I am going to become like that college student who came to see me—unable to use any sort of electrical product. At least he was still able to socialize with friends at their homes, a restaurant, a bar, go to church, spend time at the library. I can’t even do that!

Q. What do you feel is a reasonable accommodation to allow you to perform major activities of daily living?

A. Well, it’s very obvious. Smart meters must be banned, as must the digital meters that create these horrific voltage transients. It is amazing to me that all around the country, municipalities have been spending millions of dollars making every sidewalk in their jurisdiction conform to ADA requirements, *whether or not* any person with a mobility disability lives in that neighborhood. I am all for making things accessible. But the deployment of smart meters has made *every place—every building, every social setting, every home, some streets, every educational facility, every religious institution—*inaccessible to me. Every person in a wheelchair can go to city hall, can get a special cart at the grocery store, can have a sign language interpreter present if need be, but I and others who are immediately and deeply impacted by the electromagnetic fields created by the installation of smart meters in every building in Michigan, are *barred* from every public space unless we make the choice to risk, in a very deep and real way, our health.

If they could find a way to do what they believe they need to do without impacting my health and that of millions of others, I would have no protest. I do not believe that smart meters are going to reduce energy consumption. Enough studies have shown that they've had no impact. But you know what, the government and private corporations mispend my money in numerous ways. I don't go to court over it; I don't spend every waking moment of my life fighting it. It's money. C'est la vie. But my health, my ability to sleep, to function, to earn a living, let alone visit with friends—that I must fight for. Because if a smart meter or a nontransmitting digital meter is installed on my home, I will—maybe quickly, maybe over the course of a year or two—die because of lack of sleep and the depression that results from such extreme fatigue.

The bare minimum that DTE and the MPSC must do is allow those of us who are so severely and immediately affected by smart and digital meters is to keep our analog meters so that we have at least some period of time in our lives where we are not surrounded by this electromagnetic funnel that so damages us. We must at least have some sort of haven in our homes.

The only way I am surviving right now is because my home does not have smart or nontransmitting digital meter on it.

Q. If you had health problems prior to smart meter installation, have those conditions worsened, lessened, or stayed the same since installation?

A. *If* I am not exposed to smart meters, then there is no change. If I am exposed to smart meters, the fatigue is worse because I can't sleep. I do not know whether there has been a change in thyroid function as I have not had a thyroid test since installation.

I do not have a smart meter, nor a digital meter of any kind, on my home. If I did, I would likely be dead at this point, and I am not exaggerating when I say that. The sleeplessness and fatigue I experience when around smart meters for long render me incapable of doing anything. The depression that results from fatigue makes life seem meaningless—one has no energy for life, no zest. The heart palpitations I experience would surely damage my heart so badly I would slowly die. The fatigue and cognitive dysfunction would make me incapable of earning any type of living, let alone taking care of myself and my home.

Q. Is there anything else you wish to say about how smart meters have affected your health or your life?

A. Yes. My heart feels weird a lot of the time now. I do not have smart or digital meter on my home, yet ever since that exposure in June at my doctor's, my heart has felt weird off and on. No matter where I go now, I am in the RF field from smart meters. Short of hiring someone or begging someone to do all my shopping, etc., I must be exposed to some extent to these meters.

The installation of these meters has devastated my social life. It is unbelievable and unconscionable that something that hurts so many people—I am not the only one—so tremendously has been allowed to be deployed in our society.

And I want to say that the digital meters DTE proposes to replace the smart meters affect me and others as badly in nearly every way as the smart meters. If that digital meter is put on my home, I will be as dead as I will be if a smart meter is installed.

DTE has its own reasons for installing these meters. What I astounds me is that their ignorance, myopia, greed, denial, or whatever it is, is apparently causing them to be *so* rigid, *so* uncompassionate, *so* unbending, and *so* uncaring that they would force people to put on their homes something that, quite literally, is going to kill some of us very quickly. Their grid is going to work whether or not a meter is installed on my home. It's working now, and at least 12 other people in my neighborhood have refused to let them install the smart meter. They've already ruined my life in many ways. The State of Michigan needs to ensure that even if I am forced to live like a hermit, I can still *live* in my own home rather than slowly die from fatigue and heart problems.

You know, after all the work I have done so far on this case, I want to go out on Friday and unwind with some friends. But I can't! Because there is a smart meter on every restaurant in the area! Don't you people get it! You have forced me, and others, to live like hermits. None of us wants to live this way! Until a couple months ago, I *didn't* live this way.

Lastly, I want to say that I know how to live with pain. I have to get injections in to my joints every three weeks for my Ehlers-Danlos Syndrome. I have done this with no anesthesia for years. My doctor has never, ever seen anyone else do it without medication. I can take pain. I can take hardship. I am not here because I am imagining something. I am not here because of fear. I am here because my body will not survive a smart or digital meter on my home. I am here because of the reality of what these meters do to my body.

Since I submitted this testimony, the following changes have taken place (1-24-13):

Things took a turn for the worse when I spent a five days at my parents' in Arizona over Thanksgiving 2012. I have not slept well there for about a decade, but attributed it to the time change. In 2001, I slept really well. The next year, I couldn't sleep. I just tossed and turned and finally, after a very long time, would sleep fitfully. I thought it must be the bed, and moved to a different bed. It didn't help, but I stayed in that bed. Every year since, I have slept poorly, and wondered about the bed and the time change and wondered why, even if I spent two weeks there, I could not adjust and sleep.

The last two years, I basically haven't slept at all while there. Turns out, my parents have a Turtle meter on their home. It doesn't transmit wirelessly, but over the power line. It's digital. That's been on the home since 2002, which is about when I began experiencing a lot of difficulty sleeping. In about October or early November of 2012, my father told me that they had a digital meter on their home, and that he thought it had been put on about 4 years ago. This was actually good news to me, because I thought, *Well, I don't feel anything at my parents*. Everywhere there is a smart meter, I can feel the meter immediately when I enter the building, so I had made the assumption that if I couldn't feel it, it wasn't a

problem for me (or at least not an immediate problem; from what I had read, I knew that down the road it could potentially be a health problem). I was so glad, because I felt like if worst came to worst, I could move back to Arizona and live in the electric cooperative district (Trico) that includes my parents' home.

I spent five days there sleepless, again wondering why I could not sleep and wondering why I couldn't adjust to the time change. The last day I was there, my father told me that the meter on their home is a Turtle meter. That night, as I lay sleepless, it suddenly dawned on me: I couldn't sleep because they had a digital meter! But then the question was, Why was it even worse the last two years?

When I got back to Ann Arbor, I continued to talk to my parents about this. My mother reminded me that two years ago, they got wireless. (My parents live in a very rural part of Arizona, so a strong wireless antenna is required.) Clearly, the addition of the wireless to the dirty electricity already generated by the Turtle meter made the problem even worse! The bedroom where I sleep is about 15 feet from the wireless antenna (I didn't know there was an antenna nor where it was located until I spoke with my mother this year about it). In 2011 (the year the wireless was installed), I was there for 11 days, and exhausted the entire time. My sleep was abominable, although I actually did sleep. This year, I essentially did not sleep. I lay awake the entire night, tossing and turning, managing to grab a small amount of unrestful sleep early in the morning. I would awake exhausted, and spent the entire vacation, just like the year before, feeling terrible and barely able to function, barely being able to even take a walk, unable to read or do much of anything. This year, I would get up, walk a tiny bit, lie down for an hour, walk home, then lie down outside and try to sleep.

Interestingly, when I went to the Tucson International Airport to go home, I couldn't even feel the wireless in the terminal.

The cumulative effect that exposure to EMFs creates became apparent to me on the plane ride home, and afterward in Ann Arbor. I was in the plane, tired, just looking out the window (we'd probably been flying for about an hour, maybe less) and suddenly I got a headache. I attributed to the wireless on the plane (though I hadn't experienced that on the way out). As I said, I was looking out the window, and we were passing over wind turbines. I didn't think much of it. The headache passed within about 10 minutes. I was reading, about an hour later, and suddenly got a headache again. I stopped reading in order to be with my headache, looked out the window, and lo and behold, we were passing over another wind farm! Unbelievable. The headache passed as we moved away from the farm. I didn't experience any more headaches on the plane.

My ears rang intensely for 3 days after I got home, a high-pitched, intense ringing unlike anything I'd experienced before. The ringing has never stopped, two months later, though it's decreased in intensity. My body buzzed for three days, something I again had never experienced.

Since my visit to my parents, my sensitivity has increased many-fold. I went to the Taubman Medical Library at the University of Michigan on December 2, 2012. I felt a crush of what I now call one of the various EMF feelings I experience. I had never felt that in that library before. In fact, now that Ann Arbor was almost entirely installed with smart meters, I considered the University of Michigan one of the few

possible places I might spend time, since the university has its own power plant and presumably wouldn't be getting smart meters. I spent 3.5 hours at the med library. I felt really good and wired and awake when I got home around 8 p.m. That night, just like at my parents', I was unable to sleep the entire night. The next day, I was in the room of my house reserved for my occupation when I felt an EMF sensation. I couldn't understand it. The next day, I felt it again. I used a meter that measure voltage transients, and found out that one outlet in the room, an outlet into which nothing has ever been plugged, was emitting a high amount of transients. I checked it again the next day—I wasn't feeling anything strange, and the meter showed a normal reading. Since then, I feel it off and on.

The list could go on and on. On December 8, I felt something strange in my body, and sensation I associate with smart meters, though brief, and that I'd felt recently a few times in my kitchen. I noticed my neighbor using their garage door opener. It is only this neighbor's garage door opener that bothers me. The fluorescent lights at the outdoor farmer's market bothered me, yet another place I now cannot spend time in. On the 14th, I went to a friend's house that does not have a smart meter, for a meeting. I could barely stand it. She has fluorescents, halogens, dimmer switches. I asked her to turn some of them off. I still did not feel good, and some time later asked her if we could move to another room where I knew she had incandescent lights. I still did not feel good. Then she told me she had wireless. She's had wireless for some time, but this was the first time I could feel it. Then, we left the house. I was walking about five feet behind two people as one of them, about five feet from her car, when suddenly, wham!, something passed through my falx cerebri (the connective tissue membrane that separates the two lobes of the brain) and a millisecond later I heard her car door opener and heard the beep of it. Even this I was now sensitive to. As I said, the list goes on, and the passage of time has not improved things. Even my computer is problematic, and I feel strange sensations coming from it. If I stay away from buildings with smart meters, fluorescent lights, and my computer for a few days, I recover to some extent—that is, I can then interact, briefly, with these devices without feeling anything. In my living room, I have had a dimmer switch for 15 years, which I have always left turned up all the way because otherwise it bothered me. About a month ago, even that, turned up all the way, bothered me intensely, I kept the light off in my living room, illuminating the room by means of the lights from other rooms. I was finally able to put a regular switch on it a couple of days ago.

Everything I'd been told about increasing sensitivity is, sadly, coming true. I didn't think it would. I was not going to be that person. I was going to conquer this sensitivity.

I believe that the switched mode power supplies are as much of a problem as the RF. Non-analog meters may solve the problem for some people, who are only apparently sensitive to wireless, but they will not solve the problem for many of us. My experience at my parents' makes that clear, as does the sensitivity I have always had to fluorescents.

I also want to add that in the testimony I submitted in U-17053, I noted that I could no longer go inside my bank for banking purposes and switched to using an ATM. Since that testimony was written, the bank installed new ATMs that have all sorts of lights around them. I can no longer use those ATMs. I have switched to using the night drop to deposit my checks, which is not always a good option because

the money will not be picked up until the following day and because I cannot check my balance except over the phone.

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