

**NH COMMISSION TO STUDY THE ENVIRONMENTAL AND HEALTH EFFECTS
OF EVOLVING 5G TECHNOLOGY**

Meeting held:

7/1/20

1:00-3:00 pm EST

Via Zoom (<https://unh.zoom.us/j/98794338097>)

Via telephone-US (+1 646 876 9923) ID: 987 9433 8097

In attendance: (11)

Rep. Patrick Abrami-speaker of the house appointee

Rep. Ken Wells- speaker of the house appointee

Kent Chamberlin-UNH-appointed by the chancellor

Denise Ricciardi-public-appointed by the governor

Michele Roberge-DHHS- Commissioner of DHHS appointee

Dr. Paul Heroux- Professor of Toxicology, McGill University- speaker of the house appointee

Rep. Gary Woods-speaker of the house appointee

Senator Jim Gray-president of the senate appointee

Senator Tom Sherman-president of the senate appointee

Brandon Garod-AG designee, Asst. AG Consumer Protection

Bethanne Cooley-CTIA , trade association for wireless industry and manufacturers

Not present: (3)

Frank MacMillan, Jr. MD-NH Medical Society Environmental Medicine

David Juvet-Business and Industry Association

Carol Miller-NH Business & Economic Affairs Dept.

Meeting called to order by Rep Abrami at 1:01 pm

Abrami: To respect everybody's time, I am going to start the meeting. This is the Commission to Study the Environmental and Health effects of evolving 5G technology. This is the first time we are meeting via Zoom. We have had a hiatus of about 4.5 months. The last meeting was February 14th. The State House has been closed for many months and we finally got the green light to proceed via Zoom. We are using Zoom, courtesy of University of New Hampshire through Kent Chamberlin who is the Chair of Electrical and Computer Engineering Dept. Kent will go over some technical things then I will read a paragraph about why we are doing it via zoom and not in person. Kent, I will turn it over to you.

Chamberlin: This is very brief. I am assuming most of you are pretty familiar with using Zoom. In your upper right corner, you have speaker view or gallery view. You can play around with that if you want to only see the speaker or the whole gallery. You may want to play with that. You won't hurt anything. Also, if you are not speaking, please mute yourself. You will see the mute indicator on the lower left. If you wish to speak, you can unmute yourself or push the space bar, say what you are going to say and when you let up on the space bar, you will be muted again. It's a good idea if we all mute ourselves so we have no background noise. Also, if you are dropped or have any problem, you can always rejoin the session. That's really all I wanted to say on how to use Zoom. Anybody have any other comments on how we might best use zoom?

Abrami: Kent, we wanted to save the gallery squares for our members, our guest, Joel and Deb. How do we do that?

Chamberlin: If you go to a block that only has a name on it and you right click, it should give you an option to only show those who have their video turned on. This will reduce the clutter on your screen. Is that working for people?

Anderson: I think there are several members who have their video turned off, Senator Gray and Senator Sherman and Brandon Garod. So they may disappear off the screen as well. You won't see their names. Just be aware of that.

Abrami: Ok. We will go with that. I have to read a public statement now:

As chair of the Commission studying Environmental and Health Effects of evolving 5G technology, I find that due to the state of emergency called by the Governor as a result of the Covid 19 pandemic in accordance with the Governor's emergency order number 12 pursuant to executive order 2020-04, this public body is authorized to meet electronically. Please note that there is no physical location to observe and listen contemporaneously to this meeting which was authorized pursuant to the Governor's emergency order. However, in accordance with the order, I am confirming that we are providing public access to the meeting via telephone and other public access via video means. We previously gave notice to the public of the necessary information for accessing the meeting, including how do I access the meeting via Zoom and via telephone. This information was printed in the House Calendar and Senate Calendars.

Welcome everybody to the meeting. Most of our meeting is going to be hearing the presentation from Dr. Herman Kelting, who has been so gracious to be flexible in his calendar. I reached out to him about four months ago. He was going to be our next guest when we stopped doing our meetings because of the virus. We will be following along his syllabus he sent to us. Before we hear from him, we have to review the minutes of the last meeting which was February 14th.

I.Approval of minutes from 2-14-20:

Dr. Chamberlin gave me two corrections this morning. One on Page 5- one quote Dr. Chamberlin feels was from Dr. Sherman. "I don't know if we are talking about the same bill"....

Sherman: As long as it's not inflammatory, I am happy to take credit.

Abrami: Also, on page 19, the last line Dr. Chamberlin said " low e values should be low p values". Without objection, we will make those changes. Are there any other changes that people noticed from those minutes? If not, instead of taking a vote, I will say without objection, we will approve the minutes as changed. Ok with everybody? We are all set. The minutes are approved with those changes.

II: Direction during the final months: We lost four and a half months and we need to discuss where we go moving forward. I think this is going to be the last presentation on the science. In reviewing Dr. Kelting's syllabus, it is a good refresher. There's a lot of good stuff in there that will get us going again from the science standpoint. Most of us are in agreement, not all of us, that the FCC needs to look at the biological effects. We have been trying to reach out to the FCC and FDA with no luck on this. With that said, it's hard for us as a state government to change the FCC's mind on anything. But that does not mean that we shouldn't focus on certain guidance for our cities and towns on the actions that they can legally take to help mitigate any potential harm. I think that's where we need to spend the next four months on looking at what is reasonable guidance that we can give. What really highlights this for me is that about a month ago: Deb Hodgdon, who takes our minutes and me, who are both from the same town were asked by our Planner to attend a zoom kind of meeting with our Planning Board. All the meeting was really was to give the Planning Board an update on what's coming down the pike on 5G. The two takeaways I got from that meeting are that most planning boards have no idea what 5G is and they have no idea of any of the issues surrounding it. I thought we were just going to be observers in the meeting but they asked me to give an update on 5G. They were very interested in what we had to say. The other takeaway is that they are very interested in what we come up with as a Commission for guidance. They are looking for some guidance as a town. We know that there is pushback in other towns and other towns are doing things. I think we need to formulate what is reasonable and what can help with this issue.

Denise Ricciardi who is on our Commission, is on the Board Leadership in the town of Bedford. They have recently adopted ordinances that Denise was instrumental in drafting. We don't have time today to talk about those. I have done research on what other towns around the country have done and there are a variety of actions being taken. Whether they hold up to a legal standard is another discussion. But towns and communities are trying to at least put some parameters around 5G. We should be looking at those examples and working our way through to what we think is reasonable.

Now, understand as I have said over and over again, as a Commission in New Hampshire, we are going to have differences of opinion among us as Commissioners. The way this is handled from the House is that there can be a Majority Report and there can be a Minority Report. That's the way we handle these things. We only have four months. Denise and I chatted earlier about, is there any way we can get an extension? There really aren't many commissions that have reactivated since the shutdown. I will ask leadership in the House whether we can get an extension. The problem we have is that it crosses over into a whole new Legislature and we may be able to do something next year to continue our work. But I think we have to assume our goal is still to have a report out by November 1st. If we think we still need more time, we could see if we could get legislation passed but that will have to be the beginning of next year.

Because there are a lot of us, what I would like to do is to form a subcommittee to start putting some meat around the bone of ideas. Then present that to the full Commission for discussion. I think that is probably the more efficient way of proceeding. I will be looking for volunteers of those willing to work on that subcommittee. If you volunteer to be on the subcommittee, we will probably have to meet once a week for an hour or two and I don't want to wait any longer than a month for the next Commission

meeting. Because we lost 4.5 months, I can't see any other way to do this efficiently with the time we have left. If everybody wants to be on it and is willing to work every week on it, that's one thing but I don't want to have to ask everyone to do that. Tom?

Sherman: I think it's a great idea, Pat. I unfortunately, cannot be on it because I am chairing a subcommittee for the drinking water/groundwater Commission. It's a great way to get this done as long as it's representative and as long as all of us have ample time for feedback and input. Getting something down as a framework for a report and allowing feedback and discussion as a full group is a great way to do this.

Abrami: Well, the way I have done it in the past is there will be a lot of introductory stuff and all that but there will be sections of the report. I am really looking at the recommendations section that we really need to focus on. I don't want to put people on the spot here. I will just ask you to drop me a note if you want to be on the subcommittee. Denise already volunteered and I think Kent may want to be involved. Any others that want to help, that would be great. If I don't think we have enough, I may be reaching out to you and asking again if that's ok.

III. Next Commission Meeting:

Everybody pull out your calendars. Let's talk about the Next Commission meeting now. How about the 27th?

Sherman: Patrick, I work on Mondays. We usually meet on Fridays.

Abrami: Can everybody do Friday, the 24th? I think we are good for our next Commission meeting to be on Friday July 24th at 9 am via Zoom.

Ricciardi: Mr. Chairman, could I just bring something up for the record? All things being fair and equal, our information is important. As you know, I wrote explicit questions with your permission to the FDA and the FCC and still waiting for a response. At some point if we don't hear back, those are invaluable to making these very important decisions that I think those questions should be put in the record.

Abrami: Ok. Without objection, does everyone agree we should put those questions asked of the FCC and the FDA into the minutes of this meeting? Does anybody object to that? Ok so with that, we will put the record of those questions asked of the FCC and FDA into this meetings minutes.

Ricciardi: thank you.

Abrami: I will share with you those questions after this meeting. By the way, we have been having a problem getting things out the way we should. Because of the virus, the staff has not been as accessible as they should to distribute things or post on our webpage. I am trying to be in catchup mode on the things I thought were sent out but haven't been. So I am working on that. I apologize for that.

With that said, most of our meetings we have had, we have tried to get our arms around the science. We have a group that understands the science to a good degree. Dr. Kelting has put together a

presentation with 13 objections. When I looked at it, objections 7-11 are really at the heart of what we want to talk about more. He can start a little earlier and go a little longer if need be because there is a lot of material here. Dr. Kelting has been looking at this issue for many years and has published on this issue and we welcome him. After his sections, we will pause for questions.

IV. Herman Kelting, PhD presentation *(For more details, please refer to presentation materials)*

"I am grateful that you have invited me to testify on the safety of 5G/4G Small Cell Antennas placed in residential and commercial areas which I. I object to 5G/4G SCAs based upon adverse health results. In my testimony I will discuss the attributes of 5G/4G SCAs and 13 objections related there to; time will permit me to discuss only a few research citations. Since 5G is new and has only limited historical application even in 5G/4G SCAs, and 4G and prior generations well established, my research evidence will emphasize the link between 4G and prior generations RFFR with injury to living organisms. I will also discuss 4G emissions in the context of cell phone, Wi-Fi, macro cell phone base stations, etc. because 5G/4G SCAs add to already high levels of 4G emissions from many other sources. As a general rule, I oppose air-borne, wireless emissions."

Attributes of 5G/4G that I will use in my objections to 5G/4G.

- A. Two sets of antennas in a "5G/4G SCA": One beam forming on-demand 5G antenna and three 4G antennas, the latter pulsating 24/7 RFFR sited at about every 100 meters in residential neighborhoods. Movement of 5G source (e.g., cell phone) transfers signal to 4G antenna. Hence, I have concluded that the purpose of 5G is not to get 5G into residential neighborhoods but to bring 4G into neighborhoods to satisfy increased demand and revenue. *SCA wireless emissions may be avoided by **hard wiring from street to homes.***
- B. 4G signals are being increasingly modulated, thereby more biologically active, and potentially more harmful to living organisms. [Oram Miller]
 - 1. Marginal harms to fetuses and young children are very severe from 4G/5G and all other wireless communications with thin skulls, over adults who are also harmed.
 - 2. All RFFR is a stimulant causing anxiety, depression, stress, and many other illnesses. Its radiation places a forced on charged particle on our bodies, namely electrons.
 - 3. **Remember this: All manufacturing processes fail in the sense they operate outside the engineering design:** 5G/4G antennas may mal-function to create very high-power densities and frequencies injuring those nearby, who will not know the extent of the damage because they do not have meters. Even if one can prove harm with a meter, damages are limited to the company's equity because insurance companies do not insure injury from RFFR.
- C. Power densities of SCAs have not been publicly disclosed.
Oram Miller indicates power densities from 5G/4G SCAs may be up to several hundred thousand $\mu\text{W}/\text{m}^2$.

Objection #1: 28 Illnesses/ 20 Symptoms known to be caused by or inferentially linked to RFFR.

[Letter from Herman Kelting to the secretaries of Health and Human Services and Homeland Security; original letter dated October 3, 2019; Revision 1 dated January 8, 2019; Exhibit C Herman Kelting. "United States Congressional Research and Legislative Proposals to Educate the American People About the Power Density Safety of Wireless Communications (uW/m2)." *Indian Journal of Applied Research* 8(1) (January 2018): p. 263-271 (hereinafter "IJAR Jan 2018").]

- A. There are twenty-eight (28) illnesses known to be caused by RFFR. These include increased risk of brain damage to fetuses, miscarriages, cancer. children's behavioral difficulties, ADHD, cancer of the brain, salivary gland, and breasts; leukemia, anxiety, depression, stress, sleep disturbances, reduction in melatonin, cataracts, inflammation; damage to the testes, sperm, blood brain barrier, DNA (damage through strand breaks), eyes, heart, thyroid hormones, electromagnetic hypersensitivity (EMH), damage to the autoimmune system,¹ etc. [IJAR Jan 2018, p. 264-265] If a woman places her cellphone in her bra for five years, there is about a 1.0 chance of developing breast cancer.
- B. There are also twenty (20) symptoms reported by those living near 4G MCPBS (three 4G antennas housed within 5G/4G SCAs) and earlier generations. These include sleep disturbances, headache, depression, fatigue, dysesthesia (pain, itchy, burning from nerve damage associated with neurological injury), concentration dysfunction, memory changes, dizziness, irritability, anxiety, nausea, EEG changes, paranoid states, adverse neurobehavioral symptoms, etc. [IJAR Jan 2018, p. 264]
- C. Nine Determinants of Injury from Wireless Devices: This is a compilation that I have done on the subject.
 - 1. Distance from the RFFR-emitting device to a body organ. Since emissions from a device spread out with distance, the closer a body organ is to the emitting device, the greater the percentage of emissions hitting the body—if a cell phone is placed at the ear vs. using speaker phone many inches away, a much higher percentage of total emission hit the brain, salivary gland, and other nearby organs. The brain is obviously the most vulnerable to injury. Storage of a cell phone in the bra for five years has an approximate 100% chance of resulting in breast cancer. 500 meters minimum distance from MCPBS to humans and should be 1,000 meters for a two safety multiple.
 - 2. Frequency modulation: RFFR signals (e.g., cell phones) utilize a high-frequency carrier wave that is transmitted over long distanced with an attached modulated, lower frequency that carries information. The modulation may utilize frequency or amplitude modulation. Signal modulation is an extraordinarily complex technical process that may cause injury to living organisms.
 - 3. Peak (not average) power density of pulsed radiation transmitted to the body. Power density is the far field (after joining of source magnetic and electric fields) measure of RFFR strength measured by $\mu\text{W}/\text{m}^2$ (micro watts per square meter). RFFR professionals have concluded that it is pulsating peak power densities that create the most harm to

living organisms; RFFR meters have options to measure instantaneous, maximum (peak), and average maximum (peak) RFFR.

Peak densities vary widely based upon the nature of the RFFR-emitting device and signal strength. I measured the far field of one cell phone at boot up of $500,000 \mu\text{W}/\text{m}^2$, which can exceed $20,000 \mu\text{W}/\text{m}^2$ in normal operation depending upon signal strength and other factors.

4. *Spatial RFFR density from multiple sources.* The spatial RFFR density is a measure of pulsating radiation density from multiple pulsed RFFR devices such as cell phones, Wi-Fi, cordless phones, wireless security systems, etc. in an enclosed space. It is distinguishable from the metered power density *per se* because it is a function of the number of RFFR emitters in an enclosure (e.g., Wi-Fi plus 25 cell phones in a classroom)
5. *Meters understate harm from multiple nearby RFFR emitters.* As the number of emitting sources in an enclosure increases, the spatial density increases, but the power density may increase little because of the random combinations of peak instantaneous power densities from individual sources. To the best of my knowledge no one else has discussed understatement of power densities from multiple nearby RFFR emitters.
6. *RFFR source enclosed in material space- vs. outdoors-sourced RFFR.* RFFR sourced within an enclosure (autos, busses, aircraft, trains, elevators, drywall enclosures; metal is the worst enclosure) reflects off the confining material surfaces making equal RFFRs more harmful indoors than outdoors.
7. *Age at first exposure to RFFR.* Fetuses have thin, incomplete skulls with six separated bones and RFFR will make direct, almost unimpeded contact with their brain through the six thinner skull bones and cranial sutures between bones, which continue to age two. Thereafter, children have thinner skulls for several years, and continue to receive more RFFR than adults. The most dangerous situation is exposing a fetus or small child to RFFR in a metal enclosure such as a car or crawling around a Wi-Fi-sourced RFFR.

“Children whose mothers used cell phones during pregnancy had 25% more emotional problems, 35% more hyperactivity, 49% more conduct problems, and 34% more peer problems.” [BioInitiative 2012, Section 1 “Summary for the Public 2014 Supplement, Evidence for Fetal and Neonatal Effects,” citing Divan et. al. 2008]

8. *Cumulative life-time exposure to RFFR.* It is not age linear because younger people suffer more than older people because of brain structure and skull structure.
9. *Unique cellular and organ attributes and receptivity to RFFR.* Each person has different cellular and organ compositions and, thereby, different receptivity to RFFR contamination.

Objection #2: Evidence of mental illnesses of college and high school students.

- A. 25% of college students and 20% of high school students (2018) are claiming mental disabilities caused by anxiety, stress, and depression to take longer course and SAT testing times and private testing rooms because they cannot tolerate the presence of others. [IJAR Jan 2018, Exhibit G: Douglas Belkin. "Colleges Give the Disabled More Leeway." *Wall Street Journal* 05.25.2018, A3; Exhibit H: Douglas Belkin and Tawnell Hobbs. "More K-12 Students Get Special Help." *Wall Street Journal*. 07.05.2018, A4.] It is known that anxiety, stress, and depression are caused by RFFR and from this knowledge I deduced my inference that these mental disabilities are caused by cell phones and other RFFR emitting sources.
- B. College student depression rates increased from 30.9% in Fall 2013 to 39.3% in Fall 2017 ("Felt so depressed that it was difficult to function.") [IJAR Jan 2018. Exhibit E: *National College Health Assessment Survey*, p. 14]. It is known that RFFR causes depression.

Objection #3: Increases in suicides of young people

- A. Actual suicides for 10 to 14-year age group declined from 242 in 1999 to 180 in 2007 and increased to 517 in 2017 = **11.1% Geometric mean (GM) increase** for ten years ending in 2017. [IJAR Jan 2018, Exhibit F]
- B. Actual suicides for 15-24-year age group declined from 4316 in 2004 to 4140 in 2007 and then increased to 6252 in 2017 = **4.2% GM annual increase** for ten years ending in 2017. [IJAR Jan 2018, Exhibit F]
- C. College students who "Seriously considered suicide" increased from 6.0% in Fall 2010 to 12.1% in Fall 2017 [IJAR Jan 2018. Exhibit E: *National College Health Assessment 2017*, p.14; IJAR Jan 2018, p. 266;] "Seriously considered suicides" doubled in 7 years: **10.5% GM annual increase in "Seriously considered suicides"**.
- D. Notice the similarity in IRR growth rates of 11.1% GM actual suicides for 10-14-year age group and 10.5% GM for college students "Seriously considered suicide."
- E. In my opinion, there is a near 100% chance the increase in actual and contemplation of suicides are caused by RFFR from cell phones, Wi-Fi, MCPBS, and are additional measures of a catastrophic health crisis NOW.
- F. One medical doctor told me this: "Doctors know that cell phones cause suicide."
- G. **In my opinion, there is a catastrophic health crisis NOW that is being concealed.**
 - 1. Reported anxiety, depression, stress, and suicides to Secretaries of Health and Human Services and Homeland Security in original letter dated October 3, 2018.
 - 2. Secretary referred my charge to National Institute of Health immediately.
 - 3. NIH rejected three days later and stated "no notice to sender."
 - 4. HK reported NIH rejection of catastrophic health crisis to federal law enforcement agency as an improper rejection of a catastrophic health crisis.
- H. On May 27, 2020, HK accessed the CDC website for precise reference for the suicide data in Exhibit F and was unable to find it after a 45-minute search. Then called CDC and telephone responder looked for 45 minutes and could not find it. The WSJ has had a number of articles on suicides and it appears to me that the historical suicide data for 1999 to 2016 has been removed from the CDC website.

I made a number of predictions in my published article. I am just going to the last one. Some of the others have already come true of course. The last one is that working lives will decline from the mid- sixties to the mid- fifties as people have more exposure to cell phones and radio frequencies. If that occurs, that is going to pretty much be a terrible situation in an economic sense for the United States because of the additional time for retirement payments plus the loss of the skills.

Objection #4: Species extinction from 5G/4G SCAs/RFFR [Letter from Herman Kelting to Mayor Katrina Foley, Costa Mesa, CA. dated January 24, 2020 opposing 5G; HK presentation to Costa Mesa City Council February 18, 2020]

A. Barry Trower: Physicist and well-known UK 5G weapons expert, who was associated with 5G weapon systems used to injure Catholics in Northern Ireland stated:

1. Installation of 5G/4G SCAs will result in only one child in eight births being born normal three generations (60 years) from date of 5G/4G SCAs installation.
2. He also indicated that the RFFR injures 4,500 electrical subsystems in the human body by placing a force on charged particles.

B. Evidence of species extinction in five generations or less is supported by the following scientific studies and other evidence: (ten supporting references follow but I will only refer to a few because of time.)

1. A Greek study of the reproduction of rodent births exposed to RFFR resulted in "...mice exposed to 0.168 nW/cm² (1,680 µW/m²) became sterile after **five** generations, while those exposed to 1.053 nW/cm² (10,530 µW/m²) became sterile after only **three** generations." [A Balmori, 194] "A progressive decrease in the number of newborns per dam was observed, which ended in irreversible infertility" [Magras IN, Xenos, TD. "Radiation Induced Changes in the Prenatal Development of Mice." *Bioelectromagnetics* 18 (6) (1997): Abstract, 455-461 cited in A Balmori. "Electromagnetic Pollution from Phone Masts." Effects on Wildlife." *Pathophysiology* 16 (2009): 191-199, 194] (Foley 01.24.2020)
2. Study of 361 men in fertility clinic had reduced sperm count, motility, (moving property through the female reproductive tract), viability, and normal morphology (size and shape of sperm under microscope, >14% normal) as daily cell phone usage increased from zero, < 2 hours/day, 2-4 hours daily, and to >4 hours daily usage [IJAR Jan 2018, Ref 47, Agarwal, 2008]. When you follow these decreases through multiple generations you have the end of species. That is a 55% decline with an increase in cell phone use from 0-4 hours/day.

CP Sperm					
Group	Usage	Count	Motility	Viability	WHO Morphology
					% Normal
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A	No use	85.89	67.80	71.77	40.32
B	< 2 H/D	69.03	64.57	68.21	31.24
C	2-4 H/D	58.87	54.72	57.95	21.36
D	> 4 H/D	50.30	44.81	47.61	18.40

3. Experiment showed that the reproductive capacity of the insect *Drosophila Melanogaster* declined 36.4% (1 min), 42.5% (6 min), 49.2% (11 min), 56.1% (16 min), and 63.0% (21 minutes) exposure to a GSM 900 MHz carrier frequency and 217 Hz information frequency with exposure at a power density of 100,000 $\mu\text{W}/\text{m}^2$ (10 $\mu\text{W}/\text{cm}^2$). Again, this power density of 100,000 $\mu\text{W}/\text{m}^2$ is far less than the 6,000,000 to 10,000,000 $\mu\text{W}/\text{m}^2$ FCC MPE safe limits. This experiment showed the important relationship between time of exposure to RFFR and injury to a living organism. [Panagipoulos DJ et.al. "The Effect of Exposure Duration on the Biological Activity of Mobile Telephony Radiation." *Mutation Research* 699 (2010): 17:22.²
4. Cell phones operating at 900 MHz were placed in three colonies of honeybees and turned on for 10 minutes for ten days. After ten days the worker bees never returned to the three test hives because the cell phones were "...frying the navigational skills of honey bees and preventing them from returning back to their hives." Production of eggs by the queens was reduced from 350 to 100 eggs/day. The authors concluded that cell phone RFFR is a better explanation of Colony Collapse Disorder than any other theory. [Sainudeen Sahib S. "Impact of mobile phones on the density of honeybees." *Journal of Public Administration and Policy Research* 3(4) (Apr 2011): 131-133.] (Sisolac 08.29.2019, 13-14)

There are others listed in my presentation but I think this is adequate for proof.

- C. Doctors and scientists opposing 5G/4G SCAs (*There are others, but here is one*)

Baden Wurttemberg, Germany October 23, 2019

Seventy (70) doctors in Baden Wurttemberg signed and 25 doctors in white coats delivered the letter, "Doctors Warn Against 5G Mobile Communications" to the prime minister on October 23, 2019 asking for a moratorium on 5G small cell antennas because of harm to living organisms. They expressed particular concern with "electro hypersensitivity (EHS)" which now affects 5-10 percent of their population. One doctor-signatory in Baden Wurttemberg stated ***"To protect the population, we need Wi-Fi free schools and a 5G moratorium!"*** *In my opinion, we also need control over macro cell base stations.*

- D. Many communities have stopped 5G or will not be producing it.

Haifa, Israel banned Wi-Fi in schools April 20, 2016

On April 20, 2016, Haifa, Israel banned Wi-Fi in schools because of the increase in EHS/EMH and because many children were contemplating suicide. It is known that Jenny Fry, a UK teenager, committed suicide because of Wi-Fi in her school.

E. HK request for medical school research from a friend at (Stanford University) dated May 18, 2020 9:50 AM

Does RFFR make Covid-19 more virulent? Asked for Covid-19 (1) free of and (2) attached to host cells to be placed under an electron microscope with a variable frequency/variable power density RFFR to determine if the virus is more active under RFFR bombardment similar to neurons being more active in an RFFR field What gave me this idea is that we know that six CA firemen receiving brain and neurological injury from macro cell base station on the roofs of their fire stations resulting in permanent excitement of brain neurons. (which was outputting between 10-20,000 $\mu\text{W}/\text{m}^2$)

Abrami: Herman, can we pause right here and see if there are any questions at this point. I think what Herman is doing is adding to the list of papers and things that we have already heard about and discussed in the past. He is highlighting some of the papers that are of interest to him. Any questions or comments?

Chamberlin: I just have a question and it involves the bee study. We heard about the bee study and saw the paper on it. This is of course, very convincing. If you put a cellphone in a beehive and it's going to destroy the navigation abilities of the bees now that would be convincing. We are looking for strong evidence. It kind of surprises me that this is a fairly simple study to do. Do you know if it's been replicated?

Kelting: To the best of my knowledge, yes. In other words, there are other studies that have also shown damage to bees with the application of radio frequency. What I have done in my work is pick the best study available and I do not do exhaustive searches with additional support.

Chamberlin: Alright. Thank you.

Wells: I have a question as well. On objection 1, you list illnesses known to be caused by or linked to radio frequencies and I am wondering, could these antennas be used or hacked to cause deliberate injury in your opinion?

Kelting; yes, certainly. Remember, 5G is a beam form signal and that means when you turn on your cell phone, there is a beam that envelopes your body about ten degrees wide and if they combine that with facial recognition, they can do anything that they wish. They can change the power of the beam because that's what they did to the Catholics in Northern Ireland. It's not exactly the same because they can use higher frequencies but they can beam form and take out people with facial recognition in the antenna system.

Abrami: We know in China, they are using facial recognition with their 5G. There are plenty of reports showing that. Is that what you are hearing Herman?

Kelting: That sounds sensible but I am not totally familiar.

Abrami: Let's continue.

Objection #5: Injury specifically from 5G

- A. "Preliminary observations showed that MMM [millimeter waves > 30 GHz] increase the skin temperature, alter gene expression, promote cellular proliferation and synthesis of proteins linked with oxidative stress, inflammatory and metabolic processes, could generate ocular damages, affect neuro-muscular dynamics...available findings seem sufficient to demonstrate the existence of biomedical effects..." [Di Caula A. "Towards 5G Communication Systems: Are There Health Implications?" *International Journal of Hygiene and Environmental Health* 221(3) (Apr 22, 2018): 367-375]
- B. 5G transmits data in a very short time period, but there are indications that "...these bursts may lead to short temperature spikes in the skin of exposed people." Research has also shown that peak to average temperature ratios "...may lead to permanent tissue damage after even short exposures highlighting the importance of revisiting existing exposure guidelines." This means that current heat standards are too high and should be lowered. [Neufeld E and N Kuster. "Systematic Derivation of Safety Limits for Timer-Varying 5G Radio frequency Exposure Based on Analytical Models and Thermal Dose." *Health Physics* Sept 21, 2018.] [Letter from Herman Kelting to Nevada Governor Steve Sisolac, Nevada Senator Nicole Cannizzaro, and Nevada Assemblywoman Shay Backus dated August 29, 2019 (Revision 02), 11-12].
- C. 5G operates at the same frequencies (e.g. greater than 24 GHz) as the sweat duct, which is a helical antenna operating at a high specific absorption rate in extremely high frequency bands. This suggests 5G will heat the skin, one of the adverse consequences of 5G.
- D. In an e-mail dated May 27, 2020 2:05 PM , Professor Joel Moskowitz stated "**My note:** This review summarizes research on the effects of millimeter waves (>30 GHz) on the skin. None of these studies has examined 5G millimeter waves. 5G employs specialized technology including phased arrays, beam-forming, and massive MIMO (sending multiple data signals simultaneously over the same radio channel). 5G millimeter waves may be more biologically active and result in more adverse health effects than the earlier millimeter wave studies found."

Objection #6: Injury from secondary, endogenous RFFR: Sommerfeld and Brillouin precursors

- 1. Sommerfeld and Brillouin precursors are induced, propagating transient RFFRs generated endogenously in the human body (or other mediums) from an exogenous source RFFR with a changed sinusoidal structure (about 6 times smaller amplitude) that displaces charged particles in human tissue, thus damaging those particles. (A117). This means that Sommerfeld and Brillouin Precursors are RFFR that propagate endogenously within the body from a source exogenous to the body without attenuation and travel faster than the source pulse. They induce movement of proteins, DNA, and ions of potassium, sodium, chloride, calcium, and magnesium. (A117) These movements damage cells and organs [Albanese,R, Blaschak, J, Medina, R, Penn, J. "Ultrashort Electromagnetic Signals: Biophysical Questions,

Safety issues, and Medical Opportunities.” *Aviation, Space, and Environmental Medicine*. May 1994: A116-A120 (“Albanese May 1994”.; see also OMB No. 0704-0188 94-24875 AD-A282 990 dated Jan 90-Aug 93; Jakobsen PK and Masud Mansuripur. “On the Nature of the Sommerfeld-Brillouin Forerunners (or Precursors.” *Quantum Studies: Mathematics and Foundations* (November 8, 2019)) Thus, 5G beams immerse the body in a 10-degree RFFR, enter the skin and breed new, induced RFFR that travel faster than the original pulse with the radiation of the propagated RFFR damaging cells deep in the body just as 4G RFFR does.

2. Regarding the failure of FCC safety limits to consider Sommerfeld and Brillouin Precursors, Albanese stated “However, IEEE C95.1, 1991 was developed from biomedical data on pulses whose onset and offset times (or rise and fall times) were much slower than those shown in Fig 2; the standard does not embody the precursors phenomenon. Thus, in practical term, the sharp ultrafast category of pulses being discussed are not covered by IEEE C95.1-1991 or by any other formal guideline known to us...**Until the issue of tissue damage mechanisms associated to pulses that cause precursors is fully studied, the authors recommend zero human exposure to such unique precursor and gendering pulses.**” [Albanese May 1994, A118]

Objection #7: FCC antenna safety standards applied to MCPBS ignore radiation injury to living organisms at power densities many times lower than the FCC antenna safety standards.

- A. FCC antenna safety standards: 6,000,000 to 10,000,000 $\mu\text{W}/\text{m}^2$ based upon frequency.
 1. These FCC safety limits ignore actual injury from radiation at much lower limits than 6,000,000 to 10,000,000 $\mu\text{W}/\text{m}^2$. Six CA firemen received brain and neurological injury from MCPBS on the roofs of their fire stations emitting 10,000 to 20,000 $\mu\text{W}/\text{m}^2$. [Letter to two secretaries Revision 01 dated 01.08.2019, Exhibit N]

Rep. Abrami, have you heard of this California study before?

Abrami: yes

- B. International antenna safety standards:

Compare the safety of FCC safe limits of 6,000,000 to 10,000,000 $\mu\text{W}/\text{m}^2$ with other countries antennae safety limits. The wide range in country antenna safety limits means **no country really knows antenna safety limits and that the US, with the highest antenna safety limits is clearly in conflict with all other countries in this list.** [Remke, Amar and Mahesh Chavan. “A Review on RF Exposure from Cellular Base Stations.” *International Journal of Computer Applications*. 104(12) (Oct 2014): 9-16]

Power density

%US

Country or other geographical area	W/m ²	μW/m ²	
-----	-----	-----	-----
USA public exposure guidelines at 1800 MHz	10	10,000,000	100%
India	9.2	9,200,000	92%
Canada (see Attachment)	3.0	3,000,000	30%
Australia	2	2,000,000	20%
Belgium	1.2	1,200,000	12%
New Zealand	0.5	500,000	5%
Exposure limit in CSSR, Belgium, Luxemburg	0.21	210,000	2.1%
Exposure limit in Poland, China, Italy, Paris	0.1	100,000	1.0%
Exposure limit in Italy in areas with duration hour	0.095	95,000	0.95%
Exposure limit in Switzerland	0.095	95,000	0.95%
Germany: Precautionary recommendation only	0.09	90,000	0.90%
Italy: Sensitive areas only	0.025	25,000	0.25%
Exposure limit in Russia, Bulgaria, Hungary	0.02	20,000	0.20%
Austria: Precautionary limit in Salsbury only	0.001	1,000	0.01%
Germany BUND 199	0.0009	900	0.009%
New South Wales, Australia	0.00001	10	0.0001%

(1) Building Biology Institute RFFR anomaly standards for up to for sleeping:
 They consider 1,000) μW/m² as an extreme anomaly. They suggest for sleeping purposes that you have considerably less than 1,000) μW/m².
 For example, I have shielding paint on two bedroom walls of my home which brings me down to near zero.

	None	Slight	Severe	Extreme
	-----	-----	-----	-----
a. Radio frequency field radiation (High freq., EM waves) μW/m ²	<0.1	0.1 – 10	10-1000	>1000

C. RFFR power density meter readings from emissions of a MCPBS (MCPBS) taken 06.09.2020 by HK. MCPBS located 150 feet from about 100 two-story apartments with more apartments adjacent and to the east of the front 100 apartments. Meter readings taken about 100 feet from the MCPBS and 50 feet from apartments. Meter used: Safe Living Technology Safe and Sound Pro II. (Herman's research)

1. Power density meter readings in $\mu\text{W}/\text{m}^2$:

108,000	97,300	224,000	159,000
212,000	97,300	147,000	135,000
97,300	311,000	162,000	145,000
135,000	580,000	175,000	200,000
147,000	208,000	224,000	

2. Descriptive statistics

Average	196,663 $\mu\text{W}/\text{m}^2$ Rounded 197,000 $\mu\text{W}/\text{m}^2$
Stdev	109,569 $\mu\text{W}/\text{m}^2$
Coefficient of variation	0.56

3. How would you like to live 150 feet from a MCPBS emitting an average power density of 197,000 $\mu\text{W}/\text{m}^2$ when 6 CA firemen received brain and neurological injury from MCPBS on the roofs of their fire stations emitting 10,000 to 20,000 $\mu\text{W}/\text{m}^2$.

If you look at these statistics with the bolded very high values and recall that the firemen were injured at between 10-20,000. These poor people in 100 apartments are living within 50 feet of this power density.

Abrami: so Herman, this is interesting. I know a lot of people look at the readings based upon an average. What is your feeling on an average v. what the peak would be?

Kelting: Perhaps, I was not clear on that. These are all peak readings. What I do is turn on my meter and clear it and for 15-20 secs it registers peak, hold and gets the highest peak and that's what I record on here. These are not averages. Averages are much lower. Probably less than 10%. Peaks injure.

Sherman: Could I ask a question? So is it how long you are exposed to peak, is the duration of exposure as important as the intensity?

Kelting: It's a combination of both. Remember now, you are talking about a macro cell phone base station pulsating RFs, the peaks of which are within a 20-30 second interval are as I recorded here. This goes on 24x7. Theoretically if you came back one hour later or two days later, you are going to get about the same distribution and the same averages..

Chamberlin: My question involves the bandwidth. Of course, the wider the bandwidth, the greater the peak you will see because you will be looking at a superposition of a greater number of frequencies. Do you happen to know the bandwidth?

Kelting: no. I do not. I only measure radio frequencies and that could probably be one of the inadequacies of my work. But you have alerted me to that and I have a meter that measures frequencies so perhaps in the future I can consider that.

Abrami: But here's the thing. These are still within the FCC standards. Correct? The question on the table is, is the FCC standard set too high?

Kelting: That's correct.

Kelting: On January 14, 2020 I wrote a letter to the Clark County Board of Commissioners on two sets of macro towers and cell phone base stations. One was emitting up to 218,000 micro watts per square meter about 100 yards from the two facilities which was about 100 feet from homes and the second was power densities on a building with two antenna on top which were concealed incidentally. They were emitting in the building up to $37,100 \mu\text{W}/\text{m}^2$. That building is a Community Center.

D. Studies of harm from 4G MCPBS at power densities small fractions of FCC MPE limits,

1. In a study of 1000 individuals living for ten years within less than 400 meters from a GSM cellular transmitter site in Germany, it was found that the likelihood of getting cancer was three times greater than for those not near a cellular transmitter and that the patients fell ill an average 8 years earlier. Radiation in the inner area was 100 times the radiation in the outer area. The authors concluded it was necessary to monitor the health of individuals living near high radio frequency emissions from cellular base stations. [Eger, Horst, Klaus Uwe Hagen, et. al. "The Influence of Being Physically Near to a Cell Phone Transmission Mast on the Incidence of Cancer." *Umwelt-Medizin-Gesellschaft* 17(4) (2004): 7 pages]. (Sisolac 08.29.2019, 12-13)
2. An apartment building with two cell phone base stations on the roof had a mean power density of $3,811 \mu\text{W}/\text{m}^2$ with a power density range of $15.2 \mu\text{W}/\text{m}^2$ to $112,318 \mu\text{W}/\text{m}^2$. The mean radiation was reduced by 98% when the power density from the two cell phone base stations was disregarded. The authors concluded:

"Due to the current high RF radiation, the apartment is not suitable for long-term living, particularly for children who may be more sensitive than adults...the simplest and safest solution would be to turn them off and dismantle them."

[Hardell, Lennart, Michael Carlberg, et.al. "Radio Frequency Radiation from Nearby Base Stations Gives High Levels in an Apartment in Stockholm, Sweden: A Case Report." *Oncology Letters* 15(5) (May 2018): Pages 1-29]. (Sisolac 08.29.2019, 12-13)

3. In Belo Horizonte, Brazil, it was found that deaths from neoplasia (i.e., abnormal growth of tissue; cancer) increased with close proximity to cell phone base stations. For those living within 100 meters of a CPBS, the death rate was a relative risk of 1.35, for 500 meters 1.08, and for 1000 meters 1.00. The death rate from neoplasia varied from 5.83 per 1000 individuals to 2.05 per 1000 individuals. Cell phone base stations were concentrated in the Central Southern region and varied from $8,980 \mu\text{W}/\text{m}^2$ ($0.898 \mu\text{W}/\text{cm}^2$) to $30,660 \mu\text{W}/\text{m}^2$ ($3.066 \mu\text{W}/\text{cm}^2$) in 2003. Brazilian power density standards were $4,513,400 \mu\text{W}/\text{m}^2$ ($451.34 \mu\text{W}/\text{cm}^2$) at 900 MHz and $9,024,900 \mu\text{W}/\text{m}^2$ ($902.49 \mu\text{W}/\text{cm}^2$) at 1800 MHz.

Notably, the death rate from neoplasia in Belo Horizonte occurred at power densities much lower than the US standard of between 6,000,000-10,000,000 $\mu\text{W}/\text{m}^2$. [Dode, AC, Et.al. "Mortality by neoplasia and cellular telephone base stations in the Belo Horizonte municipality, Minas Gerais state, Brazil" *Science of the Total Environment* 409 (2011): 3649-3665].

4. In a study of tree damage in Germany, it was discovered that cell phone base stations damaged the sides of 60 trees facing the MCPBS. The median power density from the MCPBS on the damaged side was 995 $\mu\text{W}/\text{m}^2$ and on the undamaged side was 125 $\mu\text{W}/\text{m}^2$ using peak and peak hold values. A power density of 995 $\mu\text{W}/\text{m}^2$ is obviously far less than the FCC safe threshold of 6,000,000 to 10,000,000 $\mu\text{W}/\text{m}^2$. It is also a little less than the Building Biology recommendations of less than 1,000. The authors quote from M. Repacholi, head of the International EMF Project of the WHO (p. 567), who said in part: [Waldmann-Selsam C, et.al. "Radiofrequency Radiation Injures Trees Around Mobile Phone Base Stations" *Science of the Total Environment*. 572 (2016): 554-569.]

"Given that any adverse impact on the environment will ultimately affect human life, it is difficult to understand why more work has not been done...research should focus on the long-term, low level EMF exposure for which almost no information is available"

5. In an Israel study of cancer rates near a cell phone base station, it was discovered that 3-7 years' exposure times had cancer rates 4.15 times the cancer rate in the entire population and that the cancer rate for women was 10.5 vs. 1.0 for the whole town of Netanya. The power densities were "far below" current guidelines of 5,300 $\mu\text{W}/\text{m}^2$ (0.53 $\mu\text{W}/\text{cm}^2$) for thermal effects. [Wolf, et. al. "Increased Incidence of Cancer Near a Cell Phone Transmitter Station." *International Journal of Cancer Prevention*. 1(2) (April 2004).]
6. In a Greek study of the reproduction of rodent births in response to a microwave power density of 1,680 $\mu\text{W}/\text{m}^2$ (0.168 $\mu\text{W}/\text{cm}^2$) it was found that the rodents became sterile after five generations and those exposed to 10,530 $\mu\text{W}/\text{m}^2$ (1,053 $\mu\text{W}/\text{cm}^2$) became sterile after three generations. Note that these damaging-to-living-organisms' power densities are considerably less than the FCC safe limit of 6,000,000-10,000,000 $\mu\text{W}/\text{m}^2$. [Magras IN. "Radiation induced changes in the Prenatal Development of Mice." *Bio electromagnetics* 18 (1997): 455-461 cited in A Balmori. "Electromagnetic Pollution from Phone Masts. Effects on Wildlife." *Pathophysiology* 16 (2009): 191-199.,]

Objection #8: FCC antenna safety standards disregard power densities emitted by body proximate devices (i.e., personal property).

- A. There is only a heat standard for body proximate RFFR emitting devices and it has been shown many times there is radiation injury even though the heat standard is met.
- B. In a letter dated February 7, 2014, the Office of the Secretary of the Interior, stated:
“The electromagnetic radiation standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today.”

Objection #9: RFFR meters understate power densities from multiple nearby RFFR emitters.

This means that when you meter an area with two or more emitters, the peak power densities will not measure appropriately the addition of the second to the first and here is why.

Assume two single 4G MCPBS emitting antennas each emitting peak power densities of $10,000 \mu\text{W}/\text{m}^2$ with a combined theoretical peak of $20,000 \mu\text{W}/\text{m}^2$.

When you meter, you should probably get at some point a peak of $20,000 \mu\text{W}/\text{m}^2$. You will not get that because antennas will be emitting **unsynchronized** peaks and lows. The probability of measuring two MAX peaks of $10,000 \mu\text{W}/\text{m}^2$ each for a combined total power density of $20,000 \mu\text{W}/\text{m}^2$ is zero. Thus, if we have a metered instantaneous peak of $8,000 \mu\text{W}/\text{m}^2$ for Antenna #1 and a metered instantaneous peak of $4,000 \mu\text{W}/\text{m}^2$ for Antennas #2 for a combined instantaneous peak of $12,000 \mu\text{W}/\text{m}^2$, $12,000 \mu\text{W}/\text{m}^2$ will be the peak for the two combined antennas, which is $12,000/20,000 \mu\text{W}/\text{m}^2 = 60\%$ of the true combined peaks. You will likely never get the true a peak of $20,000 \mu\text{W}/\text{m}^2$.

Abrami: Let's pause there. Does anybody have any questions? None. Ok keep going Herman.

Objection #10: Legal vs. equitable standards to measure safe human exposure limits, US statutes and case law.

- A. Legal Standard is from Telecommunications Act of 1995 Section 704(a)(7)(B)(iv) Public law 104 104th Congress 110 Stat 66:
“No state or local government...may regulate the placement, construction, and modification of personal wireless facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commissions regulations concerning such emissions.” [Telecommunications Act of 1995 Section 704(a)(7)(B)(iv) Public law 104 104th Congress 110 Stat 66].

In my opinion, Telecommunications Act sets a legal statutory, not equitable standard, for safety unrelated to actual known injury. **704(a)(7)(B)(iv) is unconstitutional because it violates equitable safe power densities.**

- B. It is essential that equitable standards of the National Environmental Policy Act not be overridden by federal legislation. I believe there is a bill in Congress that is attempting to override the National Environmental Policy Act (NEPA).

One of the fairly good cases is.

1. In *United Keetoowah Band of Cherokee Indians in Oklahoma, Individually and on behalf of all other Native American Indian Tribes and Tribal Organization et al Petitioners vs Federal Communication Commission et al* No. 18-1129 decided August 9, 2019, the court was faced with the following issues and factual situations and held as indicated:

2. *Principal issue:* Was the FCC order “Acceleration Wireless Broadband Deployment by Removing Barriers to Infrastructure

- (1) “All ‘major Federal actions significantly affecting the quality of the human environment’ trigger environmental review under NEPA...42 USC §4332(C). Major federal actions ‘include actions ...which are potentially subject to Federal; control and responsibility.’ 40 CFR §1508.18. Under the Commissions procedures implementing NEPA, if an action may significantly affect the environment, applicants must conduct a preliminary Environmental Assessment to help the Commission determine whether ‘the proposal will have a significant environmental impact upon the quality of the human environment’ and so perhaps necessitate a more detailed Environmental Impact Statement 47 CFR §1.1308; see also 40 CFR §1.1508.9. [7]

The summary of the legal issues that I have in this section is to emphasize equitable standards not legal standards, which are unconstitutional.

Abrami: Let me pause you there Herman. So you are saying that for Indian reservations, different rules can apply now?

Kelting: No. I am not saying that. First of all, I am not a legal expert on Indian Reservations and outside of them. But what I have just quoted you from was from a federal law that is not specific to Indian Reservations. It was applied to Indian Reservations but is broadly applicable in my opinion, to all other circumstances as well. In other words, the NEPA is broadly applicable to all situations where there is environmental injury. That is why we need to use equitable standards not legal standards.

Abrami: So let's take section a/ The FCC granted licenses for the telecommunication companies to install SCA on Indian lands without any historical preservation or environmental review. So what did they do? What happened in this case?

Kelting: I don't know. I think the case was the DC court of appeals.

Objection #11: RFFR-emitting devices may interfere with reception of the Schumann Resonance

- A. The Schumann Resonance is a set of Extremely Low Frequencies caused by lightening in the ionosphere/atmosphere with a main frequency of 7.83 Hertz (cycles per second) and harmonics of 14, 20, 26, 33, 39, and 45 Hertz. Those resonances are very similar to the RFFR harmonics in the human brain.
- B. Practical application of Schumann Resonance
Experiments with individuals living underground indicate they became depressed until the Schumann Resonance was added to their environment. To give you an illustration here, I used a bike helmet lined with a heavy duty tin foil and got a severe headache several times. The tin foil of course should protect me from outside frequencies. When I removed the tin foil, I did not get the severe headache. My hypothesis was that maybe I had become separated from the Schumann Resonance like underground humans and that separation caused the headache.

Abrami: Before you go on Herman, does anyone recall? Didn't we talk about the Schumann Resonance somewhere along the line at one of our meetings? No? Ok. It sounded familiar.

Objection #12: 5G/4G SCA legislation does not provide a reasonable accommodation for those with Electromagnetic Hypersensitive.

- A. SCAs will be universally installed throughout cities and those who are EMH will have no place to go for freedom from RFFR. Your choices will be stay in your home or suicide. There is one lady who has EMH in a place where they have installed 5G and she has to have her meals delivered to her in her house. She can't go outside.
- B. Kalamata, Greece did a pilot study of 5G/4G and rejected it partially on the grounds of no protection for EMH individuals.

Objection #13: Environmental power densities should be disclosed in transfers of interests in real and personal property or in the use and occupancy of public buildings.

- A. Objective: Inform the public of the quantity of power densities ($\mu\text{W}/\text{m}^2$) in their environment.
- B. Regulatory issue #1: Power density disclosure to buyers and lessees of residential real estate.
 - 1. Power density disclosure of $\mu\text{W}/\text{m}^2$ to buyers and renters by state law. State law should require environmental assessments

- a. Meter immediately outside the housing unit. "Outside" means around the outside the walls of the building including only the detached housing unit or around the outside walls of a multistory building containing several housing units all at ground level.
- b. Meter inside the housing units within three feet of all interior walls during ordinary working hours or evening hours as required by the buyer or lessee. Date, day, and time must be shown on the inspection.
- c. Estimate spillover RFFR from adjacent housing units if you are in an apartment or a condominium. Turn off electricity in target housing unit and turn off all RFFR devices. The remainder RFFR is from outdoors or from spillover RFFR from an adjacent housing unit. Can estimate spillover RFFR my metering near party wall. I have personally measured wifi once that was throwing off a million ($\mu\text{W}/\text{m}^2$). I believe that was in the far field three feet away. That's terrible. That means that across the party wall, those people are probably getting 900,000.
- d. Measure of harm: Imagine a six-month old baby crawling on the floor with a 1,000,000 $\mu\text{W}/\text{m}^2$ Wi-Fi nearby in the same or spillover adjacent apt. Getting his or her brain fried from grossly excessive RFFR/EF. That child is going to be injured, perhaps for life.

Abrami: Herman, let's talk about this for a minute. The upper limit of the federal guideline is 10 million $\mu\text{W}/\text{m}^2$ right? Or ten W/m^2 and your example is only one tenth of that FCC limit.

Kelting: Yes and my proposal in informing the public, does not include a safety standard within the legislation. It will only say that every home and apartment will be metered and the results delivered to the renter or the buyer. There will be no notice of what is safe or not safe. The purpose of that is to avoid criticism in comparisons with the FCC. Let people start doing their own research and when they do, then you are going to get complaints. I am thinking this is the golden arrow to defeat the FCC.

Abrami: Right. I think I understand what you are saying. Publish what the readings are and let people make their own decisions.

Kelting: Exactly. It will come to a point where people will say, I am not going to buy your house because I am getting 10,000 $\mu\text{W}/\text{m}^2$ and over there at that house, I am only getting 20 or 30. I bought my house in an area by metering first. I selected my house in an area with low radio frequencies, typically less than 10.

Abrami: Ok. That's something that the Commission will be thinking about.

- C. Regulatory issue #2: Need power density disclosure and prohibition of use of RFFR emitters in public buildings.
 1. "Public buildings" mean all buildings that have unrestricted public access including government buildings, retail stores selling personal property or services, restaurants, exercise facilities, etc..
 2. The disclosure should be made using a time-dynamic RFFR meter showing power densities in $\mu\text{W}/\text{m}^2$ with one time dynamic meter for the lesser of 10,000 square feet of floor area or the actual space. This is so when you go in a building, you know what the power densities are. Those densities will include any cell phones and

wireless devices in the building. That's the beginning of managing radio frequencies in buildings in my opinion.

3. Prohibit use of wireless devices in public buildings (e.g., government buildings, schools, anyplace there are concentrations of people in an enclosure). I am also suggesting this after being a government agent and working in government buildings for thirty years of my life. Now that means that people won't be able to talk to their children at three o'clock while at work or talk to their buddies. That will reduce the power densities in buildings. Furthermore, there are issues of trespass. When you have a cellphone that is emitting a beam that is hitting my body, you are trespassing on me which, in my opinion is illegal under equitable standards.

D. Regulatory issue #3: Need power density disclosure to buyers of RFFR-emitting personal property (e.g., cell phones, Wi-Fi, cordless phones, automobiles) at point-of-sale.

1. Electric field within about one inch of the item (near field), if not a moving vehicle
2. Power densities (i.e., $\mu\text{W}/\text{m}^2$) within three feet (far field) of the device, if not a moving vehicle.
3. For autos, meter inside vehicles in an environmentally near zero geographic area.

So in addition to the mpg on a car, there should be power densities in that car as well. The same thing for wifi, cell phones, etc even though I recognize differentials in signal and signal availability is a factor.

That pretty much closes it. I would like you to comment on what you felt about this presentation.

Abrami: you summarized a lot of work that we had gone over before the shutdown. This is all good. Some of the last comments about not having cellphones in buildings, that's a tough sell.

Kelting: yes. But if you start doing some other things like disclosure in rental and buying property, then people will become acclimated and want disclosure.

Abrami: Well let's open this up.... New Zealand, for example, their standard is $500 \mu\text{W}/\text{m}^2$ or 5% of what our standard is. We have talked about this many times. How can we be so high of a standard and other countries take a totally different position? It's all over the board. Australia is 2,000,000 and Canada is 3,000,000. We have been discussing this a lot which is why we have been trying to get in touch with the FCC to answer our questions. It is hard getting through to them.

Kelting: It's impossible because they are controlled by the telecommunications industry. What happens with federal agencies is that eventually substantially all of them are controlled by the industries they regulate because their managers are essentially appointed by those being regulated.

Abrami: yes. We have heard all those arguments. As a state we can't set up standards. All we can do is warn and give guidance. I want to at least be able to say that we have tried to reach out to the FCC and FDA and others because someone is going to say why didn't you talk to the FCC? We just have to be able to say we tried and have gotten no response.

Chamberlin: At this point, after what I have read and after having other presenters before you and hearing what you are saying, I am totally convinced that there are deleterious effects on health due to radiofrequency exposure. I am sold. But, what I don't know is relative risk. In other words if I have a cell phone and live near a cell tower what is my risk compared to say, smoking or driving a car? Do we have

some dose relationship between exposure and risk? Am I ten times more likely to die from cancer if I have a cellphone? Can you put some context behind this and give me some relative understanding of how exposure is risky?

Kelting: My answer to that question is the probability of extinguishing humanity in sixty years if we continue the rate we are going even without 5G is about 100%. We are in a process of destroying humanity right now and the evidence is being concealed. My letter of complaint incidentally on that case went to the Federal Bureau of Investigation.

Abrami: They didn't respond, I imagine.

Kelting: no.

Gray: I find objections to most of what Mr. Kelting has presented today. I can't count the number of times in his presentation he said, in my opinion. I can't count the number of times he has referenced studies that have been disproved by other things. I would admit that there probably is a radiation level that I can probably reach that would be deleterious to humans but to talk about extinguishing the human race, to talk about suicides and all these other things with studies that have not been reproduced, have not been verified and are using high levels of radiation on animals or different species that aren't humans who aren't affected the same way and taking that as gospel. I just can't get there. Thank you.

Kelting: Senator, you could if you were Electromagnetically Hypersensitive as I am because I can feel the junk.

Heroux: I think that to answer your question as to evidence that there is or isn't.... in order to assess the health effect, you have to measure it and you have to believe that there is something to measure. In relation to electromagnetic radiation, when the federal government through the FCC expresses an opinion about risk that is so clear, that there is no risk below thermal levels, there hasn't been much incentive to perform measurements. There are individuals who attempted to do this. So the only variable with relatively reliable documentation is cancer. This is a variable that has a digital quality to it. Either you have it or you don't. There are international bodies who measure this in a routine fashion. What we have on this subject as you already know, are the two reports from International Agency on Research on Cancer that says low frequency and radio frequencies are related to cancer as well as a number of studies like this Brazilian study that I think is very convincing on the impact of cell phone towers because not only do they determine from an established set of cancers but your probability of dying from it is higher if you live near a cellphone tower. The problem essentially with Dr. Kelting's presentation is that he goes to a large number of effects on which there is relatively little proof because it hasn't been investigated in a very systematic way. So, we don't have the means to investigate everything in detail but perhaps cancer is an exception. Thank you.

Abrami: Let's bring this back to 5G vs. cell phones or whatever. The real issue is our communities are going to be asking for guidance on 5G. If they roll out small cells in any community, they will be rolling them out in front of people's homes low to the ground and the great mystery to all of us is how much energy is coming out of them and is it safe to walk near one of these? Obviously, industry is probably saying yes, they are very safe. We wouldn't do it if it wasn't safe. There is enough evidence out there of ills from RF radiation on all topics. You name it, there are plenty of studies. From the beginning, we have

asked, have the studies been replicated? But to me, there is enough evidence of concern. We will all have to put ourselves in the position of asking ourselves if the cell company came by and put an antenna on top of my telephone pole that is 100 feet from my house, would I think that's a good thing or a bad thing? At this point, I wouldn't be too excited about it because I am not 100% convinced that there is not some concern for safety. Maybe it's not conclusive evidence as of yet but I think the body of evidence will have to be built over time. That's the concern that we have to address for the state of New Hampshire and for the communities and citizens in the communities. That's a tough thing to get our hands around but that's what we are being asked to do.

Sherman: I was just going to second what you are saying. Whenever you are looking at studies of human health especially with potentially deleterious exposures, one other that we are grappling with is PFAS. How good are the studies on PFAS? Well, they are good enough to say everything is pointing in a bad direction. Is there something that is absolutely unequivocal? We know that with Mesothelioma and asbestos and bladder cancer and arsenic or smoking and lung cancer? No.

Is there something right now with 5G that says, boy this is really bad for us? I think it depends on who you ask. But you have got a very large, very well-funded, very powerful industry saying, trust us. We wouldn't do this if it were damaging or harmful to human health. It reminds me of some other industry issues we have had in the past saying trust us and not trying to make sure the data is robust. Therefore the data is suggesting that there is no harm. So we are left with the Precautionary Principle of public health which is, we have enough evidence to be concerned but not enough evidence to be definitive as far as I can see from sitting in on these things and what do we do?

I think the most troubling thing for me is that especially in New Hampshire but throughout the country, there is a certain amount of choice of what we expose ourselves to. With 5G, that choice is gone. Unless you want to stay in your home and wrap yourself in aluminum foil, you don't have that choice. You get into people's personal choice. We have a choice whether or not to use a cellphone but we don't have a choice if the 5G tower is going to be right outside our window because the FCC covers that. They are in charge. That is what I find to be the single most troubling aspect to this. This isn't something I can choose like what kind of drinking water I will be drinking. I can choose whether or not I smoke cigarettes. In this case, I don't have a choice. The bees don't have a choice. The environment doesn't have a choice. The trees don't have a choice. And if we get this wrong and the industry is wrong or is suppressing knowledge, which we have seen before for example in tobacco. We could be screwed, to use a medical term.

Patrick, I think you are on the right track which is saying how do we embrace what we have always embraced in New Hampshire which is our personal choice as well as our personal responsibility and recognize different people's interpretation of what is so far to me is not absolute data and what can we come out of this with in terms of recommendations? I think one recommendation is you are not going to go wrong if your community says, no 5G until we know it's safer but my concern is that we may not be able to do that.

Abrami: There are communities that have said that. It becomes how long does that last before the lawyers catch up with that and the company wins that argument. That's something that we have to consider. Whatever we do we have to be pretty confident that it will cut muster and terms of legal action or legal recommendation. I think there are things we can do to nibble around the edges on this. I

think that's what we want to do as a subcommittee is to put some things together that we think might be viable.

Sherman: I also wouldn't try to litigate this in any recommendations. I wouldn't guess where these lawsuits are going to go if a town says no 5G or something like that. I think we can certainly recognize that there is the risk of litigation or some would say with certainty if you try to close the door to 5G. I find that very troubling that an entire community would not have ability to say no to something that has some significant evidence that it may be harmful.

Kelting: How many of you own RF meters? For those of you who believe that RFs are safe, buy a meter and defend its safety based upon what you meter.

Heroux: I can recommend for you a meter, the GQ EMF390 for about \$200 you can get an ELF meter that goes to about 10Ghz and also has a frequency analyzer. It is truly a quantum leap in what is available to the consumer. It is made by an American company. It can monitor the fields every second for 24 hours and download it into your computer. So a lot of the measurements you are talking about for protection of housing and buildings become feasible when you have that kind of sophistication available to everyone.

Ricciardi: I wanted to make a couple of comments and thank Senator Sherman because I echo what he is saying. There are a few things we have to remember. We definitely have enough science and evidence to show that things are unclear and unsafe. But if we were to go and say, ok the Telecommunications Act, the FCC has not provided us with proof that is safe. That is the problem. When you are putting 5G in front of people's homes, we have to remember that it doesn't work alone. It has to have 4G with it so essentially you are forcing someone to live in a soup of microwave radiation because the science is there with the 4G. Really, that is unconstitutional.

In addition to that, we are not a town deciding whether we should roll out 5G or not. We are a group of people that have been selected on what is the best thing to do for the state of New Hampshire. It doesn't mean we have to talk about litigation because our job is to make strong recommendations on our findings whether it's agreed upon or not but that's what we have been tasked to do. That's what we have to do. We are making what we find to be an important decision for the state of New Hampshire.

Abrami: Yes. We do but again I still feel that they have to be, I don't want to say reasonable but that would not violate federal law. I think that one of the recommendations may be that our federal legislators need to do more. I think this is something we need to continue to discuss how far we want to go with this.

Woods: I have a technical question. What chance are we going to have to sort of have an executive session? I don't need to get into detail but some things that Paul and I have raised and Ken and Kent as well. I think some of the basic science things need to be reiterated perhaps. Again, we don't know all of the outcomes but if we can provide a little bit of discussion about the real basic science like we talked about proton tunneling. Our presenter brought up the issue of precursors. I think that is an important issue and I don't think people understand what a precursor is but that can have a significant impact from a quantum mechanical perspective. We have done a couple of things. We have brought this down from concern only about the ionizing radiation. We did point it out to one of our presenters no, that doesn't count. You need to talk about the non- ionizing radiation. I think even though we don't have all of the

answers, I think we can provide in our report the concerns that we have and point out that there is some basic science at the quantum mechanical level that will support that. That needs to be done because of A, B and C consequences.

Getting back to my original question, are we going to be able to do some exec sessions where we can talk about that among ourselves and flesh out some of these other issues?

Abrami: We can't have exec sessions as a whole. They need to be public. We can meet as subgroups I think up to 50%. I would love to see that actually of the more technical folks in the group. All this information is great. We have gathered a lot of good information that we need to not lose. That should be available in the report to all our communities in New Hampshire. Here are some of the facts that we found so far.

Sherman: I was just thinking that maybe before you start your subcommittees maybe the next Commission meeting could be free discussion among the Commission. There is enough resource here, people with enough knowledge. I have some questions about some of the testimony both today and in the past that I would love to just bounce off other Commission members.

Abrami: Tom, at this point I am not planning on inviting any other guest speakers because I think it's time for us to do exactly what we are talking about here. We have to start talking among ourselves and I see a lot of heads shaking yes. I think that is what we will definitely do next meeting.

Woods: That is sort of what I had in mind when I said exec session. I didn't mean exec per se but what Tom is referring to about having an open discussion.

Sherman: And then the subcommittee could take that and I know there has been some really great feedback from Commission members, great questions, and a lot of information. So having a session where we can distill that down and then the subcommittee can then go get to work. We can get a little clearer from all of us, where each of us is. Pat, I don't know maybe it would make sense for each of us to maybe start out with saying where we are and then have a discussion after that of where we are as a Commission.

Abrami: I think that is a good idea. Assume the next meeting will be two hours of discussion among ourselves about where we are at. Everybody will have a chance to weigh in on their position. I think I have a sense but you never know. Then we talk through what we think the structure of a report will look like, too. I don't want to lose some of the knowledge that we have. The report will include the minutes of these meetings as an attachment. Our minutes are quite extensive. I know when I did the report for the marijuana Commission, that report was 200 pages long with all the attached minutes we had to it. There is a lot of information in those minutes that I think is valuable.

Chamberlin: The reason I go back to relative risk is because with a number of things available to us there is a risk associated that we decide is acceptable. Here is an example: We drive cars and yet we lose 30,000+ people per year with traffic accidents. They die but we consider that to be acceptable. With something like 5G, it will clearly have benefits associated with it. Is the risk relatively low that we can go ahead with it? Or is it such that we can't? That is the one thing that hasn't come out in all the testimony that we have heard. How much of a risk is it? Is it comparable to smoking five packs of cigarettes a day? I don't know. If we are going to get traction with this politically, we need to be able to impose the realism

that this is a significant threat or perhaps it isn't. But that's one thing that I haven't yet found out in my reading either. Can anybody shed any light on that?

Woods: To me, there are two parts to the risk. One is the relative risk and the other is exposure to risk. With driving a car, you can take the back roads and stay off the highways but with 5G, you may not have that choice. There is exposure risk vs. personal acceptance risk and that has to be differentiated as well.

Wells: Just a couple of things that Dr. Kelting said today that I wanted to make sure didn't get lost. He talked about disclosure with real estate, etc. and also about RF trespass on my body or on my home. I am thinking there might be a parallel here to 20th century strip mining in Pennsylvania where a farm owner didn't own the mining rights and found himself sitting on a pile of gravel the next day. I am wondering if there is some sort of precedent here that we should be looking at.

Abrami: Herman are you still on with us?

Kelting: Yes. I am here but I am not familiar with strip mining or the case law associated with it.

Abrami: Ken, I am not sure myself but that is a good question though.

Wells: The idea of signal trespass onto my property. Dr. Woods was just talking about whether you can choose to expose yourself to the risk or not. In the case of driving, you can. Whether you decide to smoke or not, you can. But this is more like a second hand smoke kind of thing. You can't protect yourself from it under the current circumstances.

Abrami: the other thing is 5G hasn't really been rolled out extensively yet. The other problem we have with 5G is that it's a marketing concept. Each company, it means something different. Ken, I know we have talked about antennas. What's inside the antenna? How are they configured? I think one thing we can grapple with is how much energy is coming out of the antenna. I think we have boiled it down to that. The FCC standard is set so high that even if we said as a community there would be periodic monitoring of the levels that seems like it's pretty high intensity to have on top of a pole twenty feet off the ground. I think the industry would say no it's not that level of intensity coming out of that but we don't know. A lot of that is proprietary information. We don't know what the intensities are going to be.

One of my thoughts was let's monitor. Let's say a community in agreement with the cellular company says that it should not exceed FCC standards. But those standards are way high. The cellular company shouldn't object to that since they feel that things are safe within the FCC limits. My instinct is that 10 W/m² is very high level. As I said before, why did New Zealand set their standards at 5% of our levels? I don't know. Maybe they are just being more cautious. But it makes you think. Why do some countries have totally different standards than our standard? Some would say they are erring on the side of caution as Tom would like to say. Well, how can they get away with their 5G at their standards and we have standards set at 10 W/m² ? These are conversations that should be happening at the federal level really. We would love to talk to the FCC. We would love to have them on our zoom meeting right now answering our questions.

Ricciardi: I just asked when you say that FCC says this is safe then why does the Telecommunications Act say health cannot be a consideration? If it's so safe, why would that be in there?? Just a question.

Abrami: and it's a good one.

Kelting: I would like to mention one thing here. For 4G, you could insulate your body with silver embedded cloth. With 5G at the higher frequencies, you will be required to use tin foil only. It will go right through cloth even with silver threads.

Gray: Beam forming is something that I don't know that we have explored very well. It would seem to me that beam forming would cause very short time increases in radiation during the time the beam is formed. But may reduce radiation during times when we are just in monitoring or not in beam forming mode. Things like that are things that are unique to 5G. I don't think we have had sufficient discussions to understand what would happen.

Kelting: When you connect the 5G, if you move your source, it automatically transfers to 4G. So what you are really doing is communicating with 4G in all likelihood. The purpose as I indicated earlier, is that they want to put 4G into residential neighborhoods so they can increase the capacity of the system. It's not to get 5G in there.

Abrami: Help me out here. My understanding is that the 4G cell towers will be communicating with the 5G small cells, is that correct?

Heroux: 5G is an engineering concept that is designed to increase the capacity of the environment to transport data. What industry is really adept at is to transport a lot of data through wireless and essentially with the IOT concept, there is no limit to the opportunities there are to increase the amount of data being transmitted whether you use beam forming or to broadcast it. All of these avenues will be exploited and you will get to the maximum allowed standard ultimately in your environment. This is something that is expected because engineers develop applications in as much as they have the opportunity to do it. What is missing in here is that these agencies like the FCC are essentially blind on impacts on the electro-sensitive people certainly and the other health impacts of this radiation. But the intention of industry is to facilitate communications. Ultimately, wireless is a dead end. It's a little bit like oil because the spectrum is limited and you have to have more and more expensive techniques to transport more and more data. What we should be thinking about is society will need a lot more data. Let's favor optical fiber over wireless because it is not only hygienic, very safe and it has a lot of virtues not being promoted simply because of commercial reasons. Thank you.

Abrami: I just noticed we are getting a lot of chat comments. Kent, is there a way we can save the chat messages?

Chamberlin: Yes. I will save them all.

Abrami: Some of it looks like they will be helpful. There is one that says China and Russia have science-based standards on their evaluation that non thermal effects exist. There standards are certainly set a lot lower than ours. European countries have set precautionary limits. If you can share this with me and I can share it with everybody. There is one on India, which dropped its limits to one tenth of what it was before. Parliament addresses issue of beam forming and measuring issues. There is a report that some of the more technical members are interested in and we can have a discussion around. I guess I am not that much of a Zoom expert. I should have been following some of this chat going on here. We will save it and send it out.

Sherman: on the select committee, we incorporate the chat into our minutes. You may want to do that.

Abrami: We have at least fifty people on and I was told there would be people on from around the country, which is good. Herman. Thank you very much for sharing your information with us. It was very helpful. I want to thank everybody. We are getting applause here from everybody. Again, I wish we didn't have that pause for four and a half months. Got a little rusty here but I think we are back in the groove.

Roberge: Rep Abrami, I have a clarifying question. This was a very helpful discussion. As I sort of prepare for our next meeting on our position and open discussion. I need a little clarity on the charge of the Commission because what I continue to hear and this is a little bit challenging is that 3G/4G and 5G really aren't separate. They are necessary in order for the other to exist. My question is, as we begin to think about recommendations, are we looking strictly at 5G? Is that the charge of the Commission? And how do we differentiate that? That's where I am struggling.

Abrami: Thank you Michele for the question. If you go back to one of our early meetings and it's in the minutes. We early on discovered that you can't talk about 5G without talking about 3G and 4G or RF radiation in general. So, we have to talk about it all. We have learned that you can't uncouple 3/4G from 5G because they do interact with each other. We are going to try to focus on 5G but it's going to spill over to the other technologies as well. Are there any other comments?

Thanks to Kent and UNH. We are using their zoom to hold this meeting. We used your space yesterday too, for a House meeting. Kent and Ken were you there yesterday? I couldn't find you. Maybe I didn't look hard enough.

Woods: Yes. I was here.

Wells: I was wearing a mask. It was hard to recognize me.

V. Zoom Chat from 7-1-20 Commission meeting:

00:26:12 Ken Wells: Does NH have any recourse to Communications Act of 1995 insistence that municipalities and states cannot prohibit installation of antennas?

00:35:28 Ken Wells: Meeting again July 24 @9am via Zoom

01:22:30 EH Trust: I think the case is this: <https://ehtrust.org/federal-court-overturns-fcc-order-which-bypassed-environmental-review-for-5g-small-cell-wireless/>

01:23:08 EH Trust: Here is the link to the case decision
[https://www.cadc.uscourts.gov/internet/opinions.nsf/4001BED4E8A6A29685258451005085C7/\\$file/18-1129-1801375.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/4001BED4E8A6A29685258451005085C7/$file/18-1129-1801375.pdf)

01:49:22 Ken Wells: GQ EMF390

01:49:45 Ken Wells: RF meter

01:57:10 Bruce L. Cragin, PhD: You just don't want to hear from any more physicists!

01:59:12 Paul Heroux, Dr.: I am amazed that we could not get the FCC to appear.

02:00:09 Bruce L. Cragin, PhD: More good sense. Thanks for that.

02:00:59 EH Trust: The FDA should do a risk analysis f this type but has refused. Dr. Melnick states this should be done <https://ehtrust.org/statement-by-ronald-melnick-phd-on-the-national-toxicology-program-final-reports-on-cell-phone-radiation/>

02:01:34 EH Trust: "A quantitative risk assessment of the data from the NTP studies on cell phone radiofrequency radiation needs to be performed by the FDA and that information should be used by the FCC to develop health-protective exposure standards. In fact, it was the FDA that nominated cell phone radiofrequency radiation to the NTP, and I quote "to provide the basis to assess the risk to human health of wireless communication devices." Therefore, I urge the FDA to immediately conduct the risk assessment of the NTP data."

02:04:06 EH Trust: Plus there should be an assessment of the impact to birds bees and trees but none has been done. There is no health agency tasked to evaluate and develop a federal safety standard regarding impacts to trees, bees and birds. It is a gap

02:06:01 EH Trust: Montgomery county - Maryland did monitoring and found FCC limits were breeched until 10 feet around the antenna facility.

02:06:34 EH Trust: China and Russia have science based limits based on their evaluation. That non thermal effects exist.

02:07:15 lori: State Law 12'K:11 e) needs to be amended to allow testing and monitoring of RF . How can we even know if the FCC standards are being met without monitoring, sampling and testing

02:08:10 EH Trust: Several European countries have set "precautionary" limits . I have these details. And some of the documentation can be found here <https://ehtrust.org/policy/international-policy-actions-on-wireless/>

02:08:51 EH Trust: China- [https://web.archive.org/web/20120413171654/http://www.salzburg.gv.at/Proceedings_\(20\)_Chiang.pdf](https://web.archive.org/web/20120413171654/http://www.salzburg.gv.at/Proceedings_(20)_Chiang.pdf)

02:09:09 EH Trust: Russia- https://www.researchgate.net/publication/228104887_Scientific_basis_for_the_Soviet_and_Russian_radiofrequency_standards_for_the_general_public

02:10:23 EH Trust: India dropped their limits to 1/10 th pf what it was before because of this report <https://ecfsapi.fcc.gov/file/7520958381.pdf>

02:10:29 EH Trust: asl understand it

02:11:04 EH Trust: India published their findings as detailed here
<https://ecfsapi.fcc.gov/file/7520943486.pdf>

02:12:14 EH Trust: European Parliament reports address the issue of beam forming and measuring issues in this report
[https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646172/EPRS_BRI\(2020\)646172_EN.pdf?fbclid=IwAR3cD0TDOqGHpOmCWPnANN-Y6RBaa0eoQ4ZN0nuUwpVaLL8MIDtt6aKtiYM](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/646172/EPRS_BRI(2020)646172_EN.pdf?fbclid=IwAR3cD0TDOqGHpOmCWPnANN-Y6RBaa0eoQ4ZN0nuUwpVaLL8MIDtt6aKtiYM)

02:13:57 Bruce L. Cragin, PhD: Don't confuse legislation with science!

02:14:11 EH Trust: European Report here also
[https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA\(2019\)631060_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2019/631060/IPOL_IDA(2019)631060_EN.pdf)

02:15:22 EH Trust: According to Belyaev 2019, “the health effects of chronic MMW exposures may be more significant than for any other frequency range.” The abstract states that, “Various responses to non-thermal microwaves (MW) from mobile communication including adverse health effects related to electrohypersensitivity, cancer risks, neurological effects, and reproductive impacts have been reported while some studies reported no such effects. According to Belyaev 2019, “the health effects of chronic MMW exposures may be more significant than for any other frequency range.” The abstract states that, “Various responses to non-thermal microwaves (MW) from mobile communication including adverse health effects related to electrohypersensitivity, cancer risks, neurological effects, and reproductive impacts have been reported while some studies reported no such effects.

02:15:36 lori: Thank you for all your work

02:16:59 EH Trust: Brillouin precursors can be formed by high-speed data signal as Microwave News 2002 pointed out “Introducing Brillouin Precursors: Microwave Radiation Runs Deep.” When a very fast pulse of radiation enters the human body, it generates a burst of energy that can travel much deeper than predicted by conventional models. This induced radiation pulse, known as a Brillouin precursor. Brillouin precursors can also be formed by ultrawideband radiation and, in the near future, by high-speed data signals.” The 2002 Microwave News article discusses the controversy over the Pave Paws radar system which used phased array radiation. In 5G communication systems, the phased-array antenna is one of the lead front-end components. <https://microwavenews.com/news/backissues/m-a02issue.pdf>

02:17:29 EH Trust: ““When a very fast pulse of radiation enters the human body, it generates a burst of energy that can travel much deeper than predicted by conventional models (Oughstun 2017). This induced radiation pulse is known as a Brillouin precursor. Brillouin precursors can be formed by ultrawideband radiation and by high-speed data signals as used in 5G.” found in <https://ieeexplore.ieee.org/document/9002324>

02:18:29 Augustinus.Ong: Thanks for the meeting.

VI. Important questions need to be answered for NH 5G Commission:

(Questions included in the minutes sent by D. Ricciardi to FDA and FCC)

From: "Shuren, Jeff" <Jeff.Shuren@fda.hhs.gov>
Date: June 24, 2020 at 4:28:49 PM EDT
To: Denise Ricciardi <dricciardi@bedfordnh.org>
Cc: OC Ombudsman <Ombuds@OC.FDA.GOV>, Patrick Abrami <abrami.nhrep@gmail.com>
Subject: RE: Important questions NEED to be answered for N.H. 5G health task commission

[External]

Dear Ms. Ricciardi,

Thank you for reaching out to me. I have forwarded your questions to the FDA's Intergovernmental Affairs Staff who handles inquiries from State and local governments. I have included Karen Meister, their Acting Director, on this email, as well.

Best regards,

Jeff

-----Original Message-----

From: Denise Ricciardi <dricciardi@bedfordnh.org>
Sent: Tuesday, June 23, 2020 10:38 PM
To: Shuren, Jeff <Jeff.Shuren@fda.hhs.gov>
Cc: OC Ombudsman <Ombuds@OC.FDA.GOV>; Patrick Abrami <abrami.nhrep@gmail.com>
Subject: Important questions NEED to be answered for N.H. 5G health task commission

Dear Dr. Shuren,

We would appreciate an answer to these questions regarding cell phone radiation. If you could number them one by one it would help with clarity of your response.

Regarding the FDA's report "Review of Published Literature between 2008 and 2018 of Relevance to Radiofrequency Radiation and Cancer" <<https://www.fda.gov/media/135043/download>> <<https://www.fda.gov/media/135043/download>>

1. Why did the FDA only focus on cancer as a health effect?

1. The FDA said of the National Toxicology Program findings that the FDA was unsure if the tumors were a causal effect or if these results were "due to weakening of the immune response due to animal stress from

cyclic heating and thermoregulation”Does the FDA think that cancer could be an effect of whole body heating, that cancer is a thermally induced effect? If so, what other studies show that heating causes cancer?

1. Did the FDA review in a systematic way the research on impacts to the nervous system?

1. At the Commission, a study on how millimeter waves interact with insects was discussed. Did the FDA review in a systematic way the research on impact to bees, insects and pollinators?

2. Did the FDA review in a systematic way the research on impact to trees and plants?

1. Did the FDA review in a systematic way the research on impact to birds.

1. If the FDA did not investigate impacts to insects or trees, what US agencies have done so?

2. The FDA website page Scientific Evidence for Cell Phone Safety<<https://www.fda.gov/radiation-emitting-products/cell-phones/scientific-evidence-cell-phone-safety>>> has a section entitled “No New implications for 5G”. Does the FDA believe that 5g is safe or that 5G has the same health issues as 3 and 4G ? What is the FDA opinion on the safety of wireless?

1. What is the FDA opinion on FCC limits in terms of long term health effects. Does the FDA believe the current limits protect the public, children, pregnant women and medically vulnerable from health effects after long term exposure.

1. The FDA is aware that cell phone can violate FCC SAR limits at body contact on high power. The FDA has written that because there is a safety factor. What is the safety factor for the SAR the FDA relies on. At what SAR level above FCC limits will the FDA intervene?

1. What actions specifically is the FDA doing now in regards to 5G and cell phone radiation in terms of research review? How often will the FDA be releasing reports?

1. Will the FDA be evaluating the safety of 5G cell antennas? If so how? If not, what health agency is ensuring that 5G cell antennas are safe for people, wildlife and trees.

2. Cell phones and wireless devices emit several types of non ionizing radiation in addition to radiofrequency radiation. For example the devices emit magnetic fields and when a pregnant woman holds a laptop on her lap the measured fields can be high even into the baby. What agency ensures safety

related to extremely low frequency (ELF-EMF) electromagnetic fields- also non ionizing? Currently we have no federal limit, no federal guidelines and confirmed associations with cancer and many other health effects. Kaiser Permanente researchers have published several studies linking pregnant women's exposure to magnetic field electromagnetic fields to not only increased miscarriage<<https://www.nature.com/articles/s41598-017-16623-8>> and but also increased ADHD<<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2763232>> <<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2763232>> , obesity<<https://www.nature.com/articles/srep00540>> <<https://www.nature.com/articles/srep00540>> and asthma<<https://jamanetwork.com/journals/jamapediatrics/fullarticle/1107612>> <<https://jamanetwork.com/journals/jamapediatrics/fullarticle/1107612>> in the woman's prenatally exposed children. A recent large scale study <https://www.sciencedirect.com/science/article/pii/S0013935120303662?fbclid=IwAR11X_74FIT7y_RpO9WvbkE8AmAlBHAVU67yjKW8A6ZWPnPsLRioLxGsy1o#> again found associations with cancer. Please clarify which US agency has jurisdiction over ELF-EMF exposures?

1. Will the FDA be initiating any research studies on 5G and health effects?

We As a health study commission on 5G/ take these duties very seriously. We are unbiased and we are seeking all answers And facts. We are requiring your answers to the above questions.

Thank you,
Denise Ricciardi
Committee Member appointed by Governor Sununu.

The Right to Know Law (RSA 91-A) provides that Town email communications regarding the business of the Town of Bedford are governmental records which may be available to the public upon request. Therefore, this email communication may be subject to public disclosure.

V. Next meeting via Zoom: July 24th 9-11

Meeting Adjourned at 3:02 pm.