

**Testimony for Bill H.513  
April 25, 2019**

**-revised-**

**Section 19 Streamlines a Known Public Health Problem**

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Brattleboro, Vermont

Thank you Chair Cummings and Senators for hearing my testimony today.

I am Iishana Artra. I am with EMF Safety for Vermont and I am an EMF testing professional. EMF stands for electromagnetic field. I have lived in Vermont for 20 years. I am here to testify on Bill H.513, sharing the concerns of EMF Safety for Vermont, which include my own.

Winston Churchill said that “Healthy citizens are the greatest asset any country can have”. Some things never change. And that is why I am here today.

Let me begin by inviting the Committee to consider, as it hears these concerns, the precautionary principle. This has been applied to biotechnology, chemical pollutants, radiation exposure, food safety, and other public health concerns.<sup>1</sup> Essentially, the principle is this,

*If there is a threat, which is uncertain, then some kind of action is mandatory.<sup>2</sup>*

While we strongly agree with the intent of Bill H.513, to bring broadband service to all Vermonters, Section 19 is problematic from a public health perspective.

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<http://www.oxfordbibliographies.com/view/document/obo-9780199756797/obo-9780199756797-0046.xml>

<sup>2</sup> Per Sandin (1999) Dimensions of the Precautionary Principle, Human and Ecological Risk Assessment: An International Journal, 5:5, 889-907, DOI: [10.1080/10807039991289185](https://doi.org/10.1080/10807039991289185)  
<https://www.tandfonline.com/doi/abs/10.1080/10807039991289185>

Why is it a problem?

Vermont Bill H.513, Section 19 directs the Public Utility Commission to revise Rule 3.700 to implement one-touch-make-ready policies for pole attachments, which streamlines 5G.

Let me explain.

In the FCC's August 2, 2018 Order *Accelerating Wireless/Wireline Broadband Deployment<sup>3</sup> by Removing Barriers to Infrastructure Development*, the agency ordered the **one-touch-make-ready** "regime" expressly as a way to streamline the build out of 5G<sup>4</sup>.

The screenshot shows the FCC website interface. At the top, there is a navigation bar with the FCC logo, 'Browse by CATEGORY', 'Browse by BUREAUS & OFFICES', and a search box. Below this is a secondary navigation bar with links for 'About the FCC', 'Proceedings & Actions', 'Licensing & Databases', 'Reports & Research', 'News & Events', and 'For Consumers'. The main content area features the title 'FCC Speeds Access to Utility Poles to Promote Broadband, 5G Deployment'. To the left of the main text, there is a 'Document Dates' box with the following information: Released On: Aug 3, 2018; Adopted On: Aug 2, 2018; Issued On: Aug 3, 2018. The main text includes the following details: Full Title: Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment; Document Type(s): Report and Order, Declaratory Ruling; Bureau(s): Wireline Competition, Wireless Telecommunications; Description: Reforms the federal framework governing pole attachments by adopting a one-touch make ready process; addresses state and local regulatory barriers to deployment; DA/FCC #: FCC-18-111; Docket/RM: 17-79, 17-84; FCC Record Citation: 33 FCC Rcd 7705 (12); FCC Record: FCC-18-111A2\_Rcd.pdf. Below the main text, there is a 'Files' section with a list of documents and their available formats (Docx, Pdf, Txt): Report and Order; News Release; Pai Statement; O'Rielly Statement; Carr Statement; Rosenworcel Statement.

<sup>3</sup> <https://docs.fcc.gov/public/attachments/FCC-18-111A1.pdf>

<sup>4</sup> <https://www.fcc.gov/document/fcc-speeds-access-utility-poles-promote-broadband-5g-deployment-0>

The Order explains,

“Pole access...is essential to the race for 5G because mobile and fixed wireless providers are increasingly deploying innovative small cells on poles and because these wireless services depend on wireline backhaul. Indeed, an estimated 100,000 to 150,000 small cells will be constructed by the end of 2018, and these numbers are projected to reach 455,000 by 2020 and 800,000 by 2026”. (paragraph 1)

The Order states

“Consistent with the recommendations of the Broadband Deployment Advisory Committee (BDAC), we fundamentally shift the framework for the vast majority of attachments governed by federal law by adopting a new pole attachment process that includes “**one-touch make-ready**” (OTMR).” (paragraph 2)

This directive is especially troublesome given the fact that the FCC has not committed to safety studies for 5G, which it disclosed in video testimony to Senator Blumenthal of Connecticut<sup>5</sup>, and its safety guidelines for exposure to radiofrequency radiation are widely known to be outdated and irrelevant, and even by its own admission “warrant an inquiry” in the 2013 FCC Reassessment document<sup>6</sup>.

We advise the Committee that it would be reckless to facilitate the rapid deployment of pole attachments that would enable 5G without safety testing, and in the absence of evidence-based safety guidelines, and given what is known and what is suspected<sup>7</sup> about biological effects of radiofrequency radiation, and 5G millimeter waves in particular.

It appears there is an option not widely known. Vermont is exempt from one-touch-make-ready policies. The 2018 Order states,

“The (Communications Act of 1934) exempts from our jurisdiction those pole attachments in states that have elected to regulate pole attachments themselves.” (paragraph 5)

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<sup>5</sup> <https://www.youtube.com/watch?v=ekNC0J3xx1w>

<sup>6</sup> Reassessment of Federal Communications Radiofrequency Exposure Limits and Policies. First Report and Order, Further Notice of Proposed Rule Making, and Notice of Inquiry, Adopted March 27, 2013, p. 73 Federal Communications Commission.

<sup>7</sup> BiolInitiative Report can be viewed at BiolInitiative.org. This is a review of 2,000 studies.

Vermont is what is known as a “certified” state. We are included in the 2010 FCC *Public Notice of States That Have Certified That They Regulate Pole Attachments*. This list is included below. Certified states rates, regulate their own rates, terms, and conditions.



# PUBLIC NOTICE

Federal Communications Commission  
445 12<sup>th</sup> St., S.W.  
Washington, D.C. 20554

News Media Information 202 / 418-0500  
Internet: <http://www.fcc.gov>  
TTY: 1-888-835-5322

DA 10-893

Released: May 19, 2010

## STATES THAT HAVE CERTIFIED THAT THEY REGULATE POLE ATTACHMENTS

### WC Docket No. 10-101

The state of Arkansas certifies that it has issued and made effective rules and regulations implementing its regulatory authority over pole attachments, including a specific methodology for such regulation which has been made publicly available in the state.<sup>1</sup> Pursuant to Section 1.1414(b) of the Commission's rules on pole attachments, the Commission gives public notice of receipt of Arkansas's certification.<sup>2</sup> Certification by a state preempts the Commission from accepting pole attachment complaints under Subpart J of Part 1 of the Rules.<sup>3</sup>

Also pursuant to Section 1.1414(b), the Commission compiles and publishes from time to time a listing of states which have provided certification.<sup>4</sup> The following states have certified that they regulate rates, terms, and conditions for pole attachments, and, in so regulating, have the authority to consider and do consider the interests of subscribers of cable television services, as well as the interests of the consumers of the utility services. Moreover, these states have certified that they have issued and made effective rules and regulations implementing their regulatory authority over pole attachments, including a specific methodology for such regulation which has been made publicly available in the state. The Commission establishes a new docket, WC Docket No. 10-101, to collect and maintain state pole attachments certifications and addenda.

Alaska  
Arkansas  
California  
Connecticut  
Delaware  
District of Columbia  
Idaho  
Illinois  
Kentucky  
Louisiana

<sup>1</sup> Letter from Paul Suskie, Chairman, Arkansas Public Service Commission, to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 10-101 (Oct. 20, 2008).

<sup>2</sup> 47 C.F.R. § 1.1414(b).

<sup>3</sup> 47 U.S.C. § 224(e); 47 C.F.R. §§ 1.1401-1.1418.

<sup>4</sup> Section 1.1402(g) defines the term "state" to mean any state, territory, or possession of the United States, the District of Columbia, or any political subdivision, agency, or instrumentality thereof. 47 C.F.R. § 1.1402(g).

Maine  
Massachusetts  
Michigan  
New Hampshire  
New Jersey  
New York  
Ohio  
Oregon  
Utah  
Vermont  
Washington

This Public Notice supersedes *Corrected List of States That Have Certified That They Regulate Pole Attachments*, Public Notice, DA No. 08-853, 23 FCC Rcd 4878 (2008).

For further information regarding this proceeding, contact Jonathan Reel, Competition Policy Division, Wireline Competition Bureau, (202) 418-1580 or [jonathan.reel@fcc.gov](mailto:jonathan.reel@fcc.gov).

-- FCC --

In case there is any lingering question about the role of Section 19 in the 5G roll out for Vermont, I offer this written PUC comment of the CTIA<sup>8</sup>, a trade association representing the wireless communications industry. CTIA points out,

“The wireless industry is in the midst of deploying advanced wireless technologies, including 5G networks, and improvements to the Commission’s pole attachment rules **will** promote these wireless deployments”.

Furthermore, when referring to Vermont’s exempt certified status, the CTIA promotes the idea of Vermont falling in line with the FCC. They advise,

“It is wise for the Commission to examine its rules and processes to ensure they are well-aligned with those applicable in federally-regulated states”<sup>9</sup>.

In other words, Section 19 and the CTIA support Vermont coming to heel under a regulations regime to which we are not bound and that is not grounded in safety standards.

*Why is that a problem?*

The rule changes that are proposed by Bill H.513 would mean small-cell antennas could be attached to poles everywhere throughout Vermont. This is problematic in at least five ways.

1. 5G is untested for public safety as it uses an untested man-made form of pulsed radio wave radiation at frequencies far higher than any we’ve been exposed to thus far. It is not proven safe.
2. Cellular antennas have been associated with cardiovascular, endocrine, nervous system, and neuropsychiatric suffering.
3. A growing population is becoming symptomatic with increasing cumulative exposure to man-made radiowave radiation.
4. To achieve reliability, trees need to be cut for 5G’s millimeter waves to have clear line of sight.

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<sup>8</sup> April 19, 2019 Reply Comments of CTIA. Petition of Vermont Department of Public Service for rulemaking to amend Public Utility Commission Rule 3.708

<sup>9</sup> March 8, 2019 Comments of CTIA. Petition of Vermont Department of Public Service for rulemaking to amend Public Utility Commission Rule 3.708

5. Property values are known to decrease when a cellular antenna is nearby.

So, we have concerns of public safety, tree loss and damage, and decreased property values.

If one assumes the FCC has our back, I offer these two facts. The FCC has been shown to be a captured agency<sup>10</sup> and its exposure limits have not been updated since 1996.

In their 2013 reassessment, the FCC acknowledges it is not a health and safety agency.<sup>11</sup> Which explains why they rely on non-biological data. Their guidelines are derived from 1986 and 1992 studies of how much heating occurs on the plastic head of an adult-sized mannequin. Making matters worse, the plastic head was modeled on the top 10% of U.S. military recruits in 1989 - a size only found in 3% of our population.

What you are about to read is not widely known and I think you will find it very interesting.

In the FCC's own words in 2013,

“We recognize that a great deal of scientific research has been completed in recent years and new research is currently underway, warranting a comprehensive examination of [FCC limits and policies]... Moreover, the ubiquity of device adoption as well as advancements in technology and developments in the international standards arena...warrant an inquiry ... to determine whether our general regulations and policies limiting human exposure to radiofrequency (RF) radiation are still appropriately drawn.”<sup>12</sup>

I will offer that no changes have been made to the FCC limits since they recognized the need for an inquiry into their standards.

Their open hand was closed by the former FCC Chairman. Tom Wheeler warned state and local governments and the public in a 5G press conference,

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<sup>10</sup> e.g. [https://ethics.harvard.edu/files/center-for-ethics/files/capturedagency\\_alster.pdf](https://ethics.harvard.edu/files/center-for-ethics/files/capturedagency_alster.pdf)

<sup>11</sup> Reassessment of Federal Communications Radiofrequency Exposure Limits and Policies. First Report and Order, Further Notice of Proposed Rule Making, and Notice of Inquiry, Adopted March 27, 2013, p. 4 Federal Communications Commission.

<sup>12</sup> Reassessment of Federal Communications Radiofrequency Exposure Limits and Policies. First Report and Order, Further Notice of Proposed Rule Making, and Notice of Inquiry, Adopted March 27, 2013, p. 73 Federal Communications Commission.



“Stay out of the way”.

Then he said, “Turning innovators loose is far preferable to letting committees and regulators define the future. We won’t wait for the standards.”

Indeed, they have not.

In contrast to the FCC’s approach, 30 years of independent international evidence-based studies of actual human beings<sup>13</sup>, have confirmed that man-made radiofrequency radiation from cellular antennas causes harm in humans, pollinating insects, birds, and plants, with children particularly at risk.

Effects are widespread throughout the body. They involve cardiovascular, endocrine, nervous system, and neuropsychiatric suffering. Cancer, diabetes, depression, anxiety, resistance to antibiotics, disorientation, tinnitus - these are just a few of the known symptoms of exposure to RF radiation.

You can view the FCC mannequin as well as some of these major biological findings in Attachment 1.

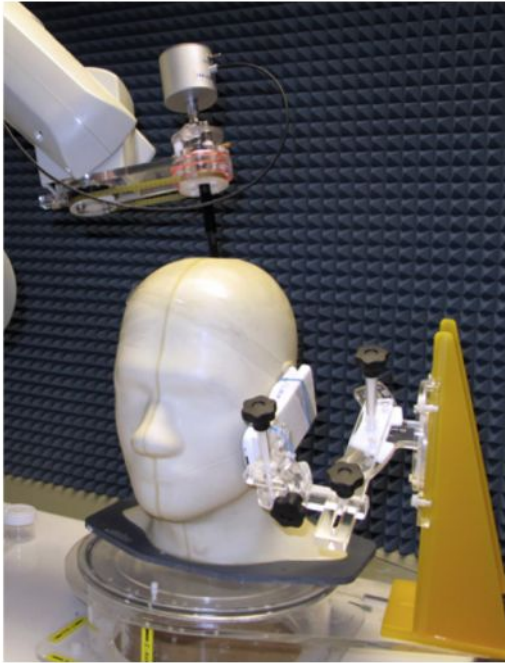
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<sup>13</sup> Download the report of the studies, the BioInitiative Report, at [BioInitiative.org](http://BioInitiative.org)

## Attachment 1A

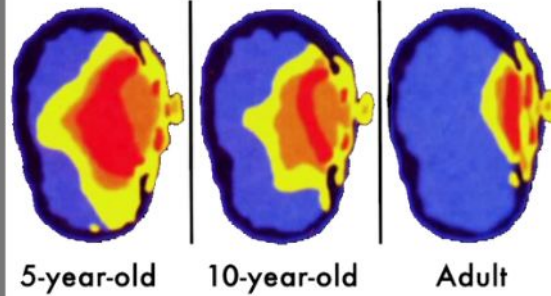
### FCC's Approach

1996 to present



### Evidence-Based Approach

1970-present




## Attachment 1B

Please note that where the term “systematic review” appears, each review is of multiple studies. For example, one systematic review could include 100 studies. In total, these particular reviews have examined over 1,200 studies.

# How RF Exposure Effects the Mind & Body

Partial Summary of the Research

- DNA Damage
- Voltage Gated Calcium Channels
- Blood Brain Barrier opening
- Melatonin Hormone Reduction
- Microbiome Disruption

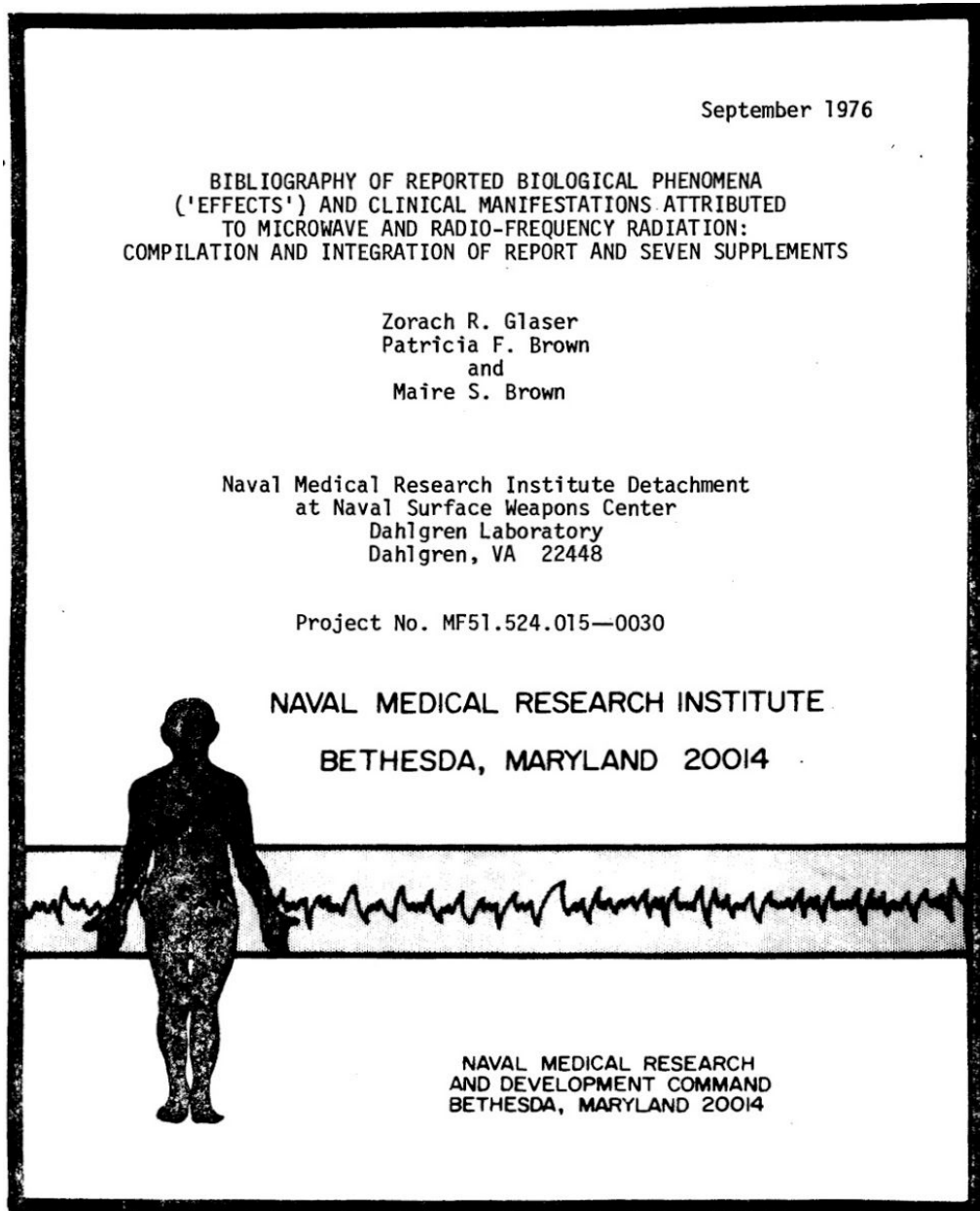
- 
- Fertility
  - Neurological and neuropsychiatric Impacts - 25 systematic reviews
  - Cellular DNA damage - 21 systematic reviews -Causing Cancer & Germ Line Mutations
  - Apoptosis - Programmed Cell Death - 13 systematic reviews
  - Oxidative stress - free radical damage - 19 systematic reviews
  - Endocrine - hormonal effects - 12 systematic reviews
  - Excessive intracellular calcium - 15 systematic reviews
  - Cancer - 35 systematic reviews

You can also see the 1976 Naval Medical Research Institute's listing of 100 effects. It is Attachment 2.

## Attachment 2

This report is a successor to the 1971, 1972, 1973, 1974, and 1975 compilations.

Note: P. 174 is missing from the unclassified copy. Studies from 1990-2019 can be found at



BiInitiative.org

17. Alterations in the Biocurrents (EEG?) of the Cerebral Cortex (in animals)
18. Changes in the Rate of Clearance of Tagged Ions from Tissue
19. Reversible Structural Changes in the Cerebral Cortex and the Diencephalon
20. Electrocardiographic (EKG) Changes
21. Alterations in Sensitivity to Light, Sound, and Olfactory Stimuli
19. Reversible Structural Changes in the Cerebral Cortex and the Diencephalon
20. Electrocardiographic (EKG) Changes
21. Alterations in Sensitivity to Light, Sound, and Olfactory Stimuli
22. Functional (a) and Pathological (b) Changes in the Eyes: (a) decrease in size of blind spot, altered color recognition, changes in intraocular pressure, lacrimation, trembling of eyelids; (b) lens opacity and coagulation, altered tissue respiration, and altered reduction-oxidation processes
23. Myocardial Necrosis
24. Hemorrhage in Lungs, Liver, Gut, and Brain
25. Generalized Degeneration of all Body Tissue
26. Loss of Anatomical Parts
27. Death
28. Dehydration
29. Altered Rate of Calcification of Certain Tissue

} At Fatal Levels  
of Radiation

C. Central Nervous System Effects

1. Headaches
2. Insomnia
3. Restlessness (Awake and During Sleep)
4. Electroencephalographic (EEG) Changes
5. Cranial Nerve Disorders
6. Pyramidal Tract Lesions
7. Conditioned Reflex Disorders
8. Vagomimetic Action of Heart; Sympaticomimetic Action
9. Seizures, Convulsions

D. Autonomic Nervous System Effects

1. Neuro-vegetative Disorders (e.g., alteration of heart rhythm)
2. Fatigue
3. Structural Alterations in the Synapses of the Vagus Nerve
4. Stimulation of Parasympathetic Nervous System (Bradycardia), and Inhibition of the Sympathetic Nervous System

E. Peripheral Nervous System Effects

Effects on Locomotor Nerves

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F. Psychological Disorders ("Human Behavioral Studies") - the so-called "Psychophysiologic (and Psychosomatic) Responses"

1. Neurasthenia - (general "bad" feeling)
2. Depression
3. Impotence
4. Anxiety
5. Lack of Concentration
6. Hypochondria
7. Dizziness
8. Hallucinations
9. Sleepiness
10. Insomnia
11. Increased Irritability
12. Decreased Appetite
13. Loss of Memory
14. Scalp Sensations
15. Increased Fatigability
16. Chest Pain
17. Tremor of the Hands

G. Behavioral Changes (Animal Studies)

Reflexive, Operant, Avoidance, and Discrimination Behaviors

H. Blood Disorders

(V = in vivo)  
(v = in vitro)

Changes in:

1. Blood and Bone Marrow
2. Phagocytic (polymorphs) and Bactericidal Functions of Blood (V,v)
3. Hemolysis Rate (increase), (a shortened lifespan of cells)
4. Sedimentation Rate (increase), (due to changes in serum protein levels or amount of fibrinogen (?))
5. Number of Erythrocytes (decrease), also number of Lymphocytes
6. Blood Glucose Concentration (increase)
7. Blood Histamine Content
8. Cholesterol and Lipids
9. Gamma (also  $\alpha$  and  $\beta$ ) Globulin, and Total Protein Concentration
10. Number of Eosinophils
11. Albumin/Globulin Ratio (decrease)
12. Hemopoiesis (rate of formation of blood corpuscles)
13. Leukopenia (increase in number of white cells), and Leukocytosis
14. Reticulocytosis

I. Vascular Disorders

1. Thrombosis
2. Hypertension

J. Enzyme and Other Biochemical Changes

Changes in activity of:

1. Cholinesterase (V,v)
2. Phosphatase (v)
3. Transaminase (v)
4. Amylase (v)
5. Carboxydismutase
  
6. Protein Denaturation
7. Toxin, Fungus, and Virus Inactivation (at high radiation dose levels), Bacteriostatic Effect
8. Tissue Cultures Killed
9. Alteration in Rate of Cell Division
10. Increased Concentration of RNA in Lymphocytes, and Decreased Concentration in Brain, Liver, and Spleen
11. Changes in Pyruvic Acid, Lactic Acid, and Creatinine Excretions
12. Change in Concentration of Glycogen in Liver (Hyperglycemia)
13. Alteration in Concentration of 17- Ketosteroids in Urine

K. Metabolic Disorders

1. Glycosuria (sugar in urine; related with blood sugar?)
2. Increase in Urinary Phenol (derivatives? DOPA?)
3. Alteration of Rate of Metabolic Enzymatic Processes
4. Altered Carbohydrate Metabolism

L. Gastro-Intestinal Disorders

1. Anorexia (loss of appetite)
2. Epigastric Pain
3. Constipation
4. Altered Secretion of Stomach "Digestive Juices"

M. Endocrine Gland Changes

1. Altered Pituitary Function
2. Hyperthyroidism
3. Thyroid Enlargement
4. Increased Uptake of Radioactive Iodine by Thyroid Gland
5. Altered Adrenal Cortex Activity
6. Decreased Corticosteroids in Blood
7. Decreased Glucocorticoidal Activity
8. Hypogonadism (usually decreased testosterone production)

N. Histological Changes

1. Changes in Tubular Epithelium of Testicles
2. Gross Changes

Cancer is a widely known cause for concern about the widespread siting of cellular antennas. Recent findings have prompted doctors and scientists from around the world to advocate for the elevation of RF radiation from a possible to a known carcinogen<sup>14</sup>, such as asbestos, formaldehyde, and tobacco smoke.

Currently, RF radiation from devices that emit non-ionizing RF radiation in the frequency range 30 kHz-300 GHz, is a Group 2B, i.e. a 'possible', human carcinogen. This range includes all cellular antenna, including 5G.

Two recent large studies have offered significant findings. More telling than a mannequin, the world's largest animal study of cell tower radiation, known as the Ramazzini study, confirmed the \$25million United States National Toxicology Program's cell phone study. Both show findings that radiofrequency radiation has nonthermal biologic effects that relate to heart and brain cancer. This also corroborates a host of other studies, making a case for increasing the carcinogenic rating of radiofrequency radiation.

Ronald Melnick, the designer of the NTP study urges, "the FDA, FCC, and other agencies should promote precautionary measures for the population – especially for children."

We also now know that our skin's sweat ducts intensely absorb the higher frequency waves, such as those used by 5G. Our skin and eyes act like receptors and draw in the millimeter waves.<sup>15 16</sup>

Electromagnetic Sensitivity, also known as Microwave Sickness and rapid aging syndrome is experienced by an increasing number of children and adults around the world. Symptoms resemble those experienced by radar operators from the 1940s to the 1960s and are well described in the literature<sup>17</sup>.

Actually, we are all sensitive to EMFs, simply by being bioelectrical beings.

However, Vermonters with electromagnetic sensitivity already experience the symptoms, such as tinnitus, muscle pain, heart palpitations, disorientation, brain fog, depression, pain

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<sup>14</sup> <https://ehtrust.org/worlds-largest-animal-study-on-cell-tower-radiation-confirms-cancer-link/>

<sup>15</sup> "[The Human Skin as a Sub-THz Receiver – Does 5G Pose a Danger to It or Not?](#)" and "[The Modeling of the Absorbance of Sub-THz Radiation by Human Skin](#)" (Betzael 2017, Betzael 2018).

<sup>16</sup> <https://principia-scientific.org/study-human-sweat-ducts-act-as-antennas-for-5g-radiation/>

<sup>17</sup> Havas. M. Radiation from wireless technology affects the blood, the heart, and the autonomic nervous system. - PubMed - NCBI <https://www.ncbi.nlm.nih.gov/pubmed/24192494>



or pressure in the chest accompanied by anxiety, and activation of the "fight-or-flight" response.

Symptoms can be debilitating and leads to poor job or academic performance, having to stop work or move. Sometimes it complicates recovery from trauma and addiction. Imagining these effects on a larger scale, economists may want to rethink 5G.

France on January 17th, ruled for the first time that Electromagnetic Hyper Sensitivity (EHS) can be developed from exposure lower than the standards, and that employers can be held liable. Bear in mind that France's limits are much lower than ours<sup>18</sup>.

In fact, many states and countries are pushing back against the 5G power grab, to protect their public health, fiscal health, and rights-of-ways. You can see lists of those states and countries below..

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<https://nexusnewsfeed.com/article/health-healing/french-court-recognized-electromagnetic-sensitivity-as-a-n-occupational-disease/>

# Will Vermont Make the List?

## States/Cities pushing back on 5G/small-cell/FCC Overreach



**Arkansas** - Booneville, Fayetteville, Hot Springs

**California** - Governor Brown vetoed the SB 649 streamlining bill, Danville, Fairfax, Los Angeles, Mill Valley, Monterey, Nevada City, Palos Vardes, Petaluma, Ross Valley, San Anselmo, San Jose, San Rafael, Sebastopol, Sonoma, Walnut City,

**Colorado** - Denver

**Connecticut** - Senator Blumenthal (Dem), Warren

**Idaho** - Kuna

**Indiana** - Bill HB 1050 Bipartisan

**Kentucky** - Dayton

**Maine** - The streamlining Bill ME H 1170/LD 1690 failed.

**Maryland** - Taneytown; streamlining Bills S 1188 and H 1767 failed.

**Massachusetts** - Boston and other cities may sue the FCC over fee caps and right-of-way infringements, Burlington, Holyoke, Malden City, Pittsfield

**Michigan** - Senator Colbeck (Rep)

**Mississippi** - Hattiesburg

**Nebraska** - L 389 streamlining Bill was abandoned,

**New Hampshire** - State Bill 522 is in hearings

**New Jersey** - Little Silver

**New York** - Hampstead; streamlining Bill A07489 failed.

**North Carolina** - Charleston, Raleigh

**Ohio** - Mason

**Oregon** - Portland may sue the FCC; McMinnville

**Pennsylvania** - HB 2564 HB 1620 did not make it out of committee in the 2017-2018 session; Lancaster

**South Dakota** - Sioux Falls City Council

**Texas** - Austin, Dallas and 20 other cities are suing the State of Texas

**Utah** - SB 0189 enables local gov to exercise land use, zoning, and other permitting authorities, and aesthetic control.

**Washington** - HB 2592 streamlining Bill is kept in committee

**West Virginia** - HB 4357 2018 streamlining bill stalled in the senate

**Wisconsin** - Madison, and other cities.



Source: <https://broadbandnow.com/report/5g-small-cell-deployment-state-laws/>

In total, 25 states are pushing back on 5G and the FCC's 2018 Acceleration Order<sup>19</sup>. Some states and cities only tackle the cap on fees, other tackle the aesthetic control, others focus on health also.

Our neighbors in New Hampshire passed Bill H.522 in the House entitled, Establishing a commission to study the environmental and health effects of evolving 5G technology. That Bill is now in Senate Committee and a public hearing was conducted April 16.

<sup>19</sup> Declaratory Ruling and Third Report and Order, FCC, September 26, 2018, Federal Communications Commission

Our other neighbor, Burlington, Massachusetts established annual recertification requirements with associated fees, motivating Verizon to withdraw its small cell permit application.<sup>20</sup>

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<http://www.bcattv.org/bnews/top-stories/verizon-drops-small-cell-wireless-booster-application-in-face-of-fees/> AND

<http://www.bcattv.org/bnews/top-stories/verizon-drops-small-cell-wireless-booster-application-in-face-of-fees/>

## International Cities Pushing Back - Examples

**Brussels, Belgium:** “The people of Brussels are not guinea pigs whose health I can sell at a profit. We cannot leave anything to doubt,” declared Brussels Environment Minister Céline Fremault. March 31, 2019

**XII Municipality of Rome and Trento, Italy:** The Rome resolution asks “the mayor to stop the 5G trial and not to raise the limit values in the threshold of electromagnetic radiation avoiding the positioning of groups of mini-millimeter microwave antennas on homes, schools, day centers, recreation centers, street lamps and more.”

**Florence, Italy** applies the precautionary principle, refusing permissions for 5G and referring to “the ambiguity and the uncertainty of supranational bodies and private bodies (like ICNIRP)”, which “have very different positions from each other, despite the huge evidence of published studies” Italy, March 24, 2019

**Russia:** The Russian Ministry of Defence refuses to transfer frequencies for 5G, which effectively delays any 5G rollout there for several years. March 28, 2019

**Germans** sign a petition en masse to force the German Bundestag to debate 5G. April 4, 2019

**The Netherlands,** Members of Parliament insist that radiation research must be carried out before any approval of the 5G network. April 4, 2019

**The Canton of Vaud** adopts a resolution calling for a moratorium on 5G antennas until the publication this summer of a report on 5G by the Swiss Federal Office for the April 9, 2019

**Geneva** adopts a motion for a moratorium on 5G, calling on the Council of State to request WHO to monitor independent scientific studies to determine the harmful effects of 5G. April 10, 2019

I would be remiss if I did not mention the trees here in our beautiful state. Too many Vermont trees, the young and old growth would have to be cut down or hideously trimmed to make way for 5G. This is because wet, icy, and snow-laden leaves have been shown to interfere with 5G's extremely high frequency millimeter wave bands<sup>21</sup>. Nivi Thadasina, senior director of engineering of Samsung says, density of foliage "plays a big role, the thickness of the trees matters,... it kills the signal....Moisture levels play a role as well."<sup>22</sup> That does not bode well for our Green Mountain State.

Finally, it is not news that property values decrease when a cell tower is nearby. The 2019 issue of the Journal, Land Economics published a study showing a loss of \$10 million dollars in property value for properties located within 1,000 feet of a known radio wave antenna<sup>23</sup>. Telecom tells us that 5G mini cell towers would be placed every 2-10 houses or buildings.

In some areas near cellular antennas, property values have decreased by as much as 20%.<sup>24</sup> In 2014 the National Institute for Science, Law and Public Policy found 79% of people surveyed would under no circumstances ever purchase or rent a property within a few blocks of a wireless cell tower or antenna.<sup>25</sup>

The gravity of these facts is intensified by the fact that fetuses and children are more adversely impacted and sooner than adults.<sup>26</sup>

All of this begs the question, "Does Vermont really want to achieve 'ubiquitous' radio wave radiation?"

Applying the precautionary principle could inspire greater innovation for real solutions.

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<sup>21</sup> Hill, Kelly. Transitioning to a 5G World. RCR Wireless. 2017

[https://img.en25.com/Web/ArdenMediaCompanyLLC/%7Be924268f-383f-40fd-aa0f-aaa7b5ff9ab6%7D\\_Nov\\_2017\\_5G\\_Optimization\\_\(1\).pdf](https://img.en25.com/Web/ArdenMediaCompanyLLC/%7Be924268f-383f-40fd-aa0f-aaa7b5ff9ab6%7D_Nov_2017_5G_Optimization_(1).pdf);

<https://www.saferemr.com/2017/11/5g-wireless-technology-cutting-through.html>

<sup>22</sup> <https://www.saferemr.com/2017/11/5g-wireless-technology-cutting-through.html>

<sup>23</sup> Stephen L. Locke and Glenn C. Blomquist. The Cost of Convenience: Estimating the Impact of Communication Antennas on Residential Property Values (Land Economics, Feb. 2016)

<http://gattonweb.uky.edu/Faculty/blomquist/LE%202016%20Locke%20Blomquist%20towers.pdf>

<sup>24</sup>

<http://nyrej.com/examining-invisible-urban-pollution-and-its-effect-on-real-estate-value-in-new-york-city-by-william-gati>

<sup>25</sup> <http://electromagnetichealth.org/electromagnetic-health-blog/survey-property-desirability/>

<sup>26</sup> [Electromagnetic fields from mobile phones: recent developments](#), Lloyd's of London Emerging Risks Team Report, 2010

*If there is a threat, which is uncertain, then some kind of action is mandatory.*<sup>27</sup>

We are a certified state and we have the option of Fiber.

Fiber is more reliable than wireless. Fiber conveys clear signals much further distances than wireless does and has less environmental and aesthetic impact. Cellular antennas, such as for 5G, require clear line of sight, which means trees are cut in order to increase reliability. Since wireless systems work on shared radio frequencies, interferences like weather can impact wireless bandwidth, but not so for Fiber. Fiber also does not carry health risks.

Given these facts and those contained in the April 18 Statehouse Meeting in Room 10, we ask these modifications be made to Bill H.513.

1. Replace “Broadband” references in the bill with “FTTP” (Fiber to The Premises)
2. Add a section that places a stay on attachment of 5G antennas to poles and towers until proven safe and reliable, including 4G antennas that can be upgraded to 5G via software.
3. Amend Section 19 to facilitate fiber optic only.
4. Amend Section 19 by removing reference to “one-touch-make-ready”.

I would like to leave you with a question. How will Vermont respond to President Trump’s admonishment, “the local areas are going to listen to us very very strongly.” Or, The FCC’s assertion that it “can’t let unnecessary barriers to broadband deployment keep us from leading the global economy”?

I would suggest that the health of children and all Vermonters, the trees, and our property values are not unnecessary and that we are worth more than the FCC’s plastic mannequins. And, that yes, healthy citizens are still the greatest asset any country can have (Winston Churchill).

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<sup>27</sup> Per Sandin (1999) Dimensions of the Precautionary Principle, Human and Ecological Risk Assessment: An International Journal, 5:5, 889-907, DOI: [10.1080/10807039991289185](https://doi.org/10.1080/10807039991289185)  
<https://www.tandfonline.com/doi/abs/10.1080/10807039991289185>