



DEVIN LEMAHIEU

STATE SENATOR

Senate Committee on Utilities and Housing

Testimony on Senate Bill 239

May 29, 2019

Vice-Chairman Feyen and members,

Thank you for hearing my testimony on Senate Bill 239 which establishes a framework for the deployment of small cell facilities.

Consumers and businesses are using mobile devices more than ever to connect to everyone and everything around them. According to the Federal Communications Commission, the United States is moving swiftly to lead the world in the next generation of wireless connectivity – or 5G.

The deployment of small cell facilities will pave the way for 5G connectivity. Small cells are wireless antennas that can be installed on existing structures like utility poles and street lights to enhance existing 4G/LTE wireless networks.

Wisconsin is the only state in the Midwest to not adopt a law defining 5G wireless distribution. Unless a uniform framework for deployment is set, Wisconsin stands to lose significant wireless infrastructure investment.

SB 239 sets the structure for small cell deployment throughout Wisconsin and sets the standards and fees wireless service providers must adhere to when applying for small cell locations. Furthermore, the proposal provides local governments with additional flexibility to regulate setbacks for certain mobile service support structures.

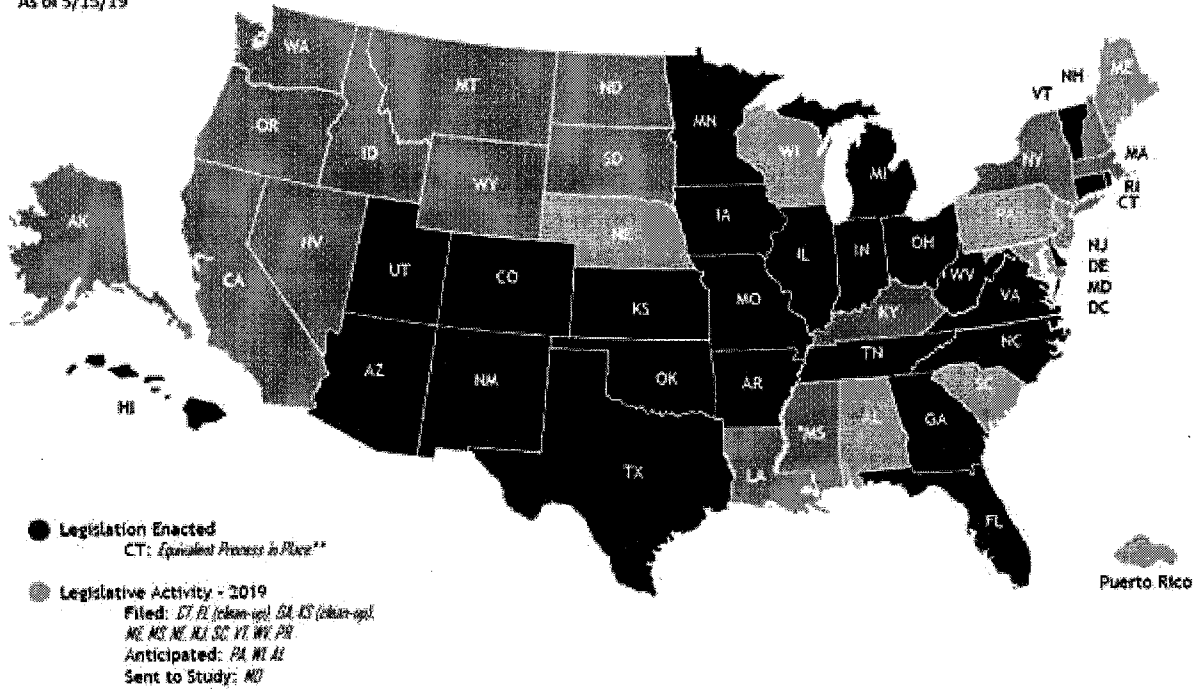
Representative Kuglitsch and I authored similar legislation last session. While SB 239 has the same goal as last session's proposal, a recent FCC ruling has provided basic guidelines for deployment of this new technology. Some of these federal procedures have been incorporated into this legislation.

I ask you to support this legislation to ensure that Wisconsin residents are able to experience the next generation of wireless technology.

Thank you for your time and I am happy to answer any questions.

National Wave of Small Cell Legislative Activity

As of 5/15/19



Puerto Rico

MIKE KUGLITSCH

STATE REPRESENTATIVE • 84TH ASSEMBLY DISTRICT

DATE: May 29, 2019
RE: **2019 Senate Bill 239**
TO: Senate Committee on Utilities & Housing
FROM: Representative Mike Kuglitsch
SUBJECT: Regulation of wireless facilities and imposing setback requirements for certain mobile service support structures.

Thank you Chair LeMahieu and Members of the Committee for your consideration of Senate Bill 239, which regulates 5G wireless deployment and authorizes setbacks for macro cell towers. I am here to request your support in the deployment of the next generation of advanced wireless technology and to return more local control to macro cell tower siting in Wisconsin.

Consumers and businesses are using mobile devices more than ever to connect to the world around them and data traffic on AT&T's mobile network has grown more than 470,000% since 2007.

To meet the growth in consumer demand, the United States is moving swiftly to lead the world in the next generation of wireless connectivity. 5G, or small cells, are wireless antennas that can be installed on existing structures like utility poles and street lights to enhance existing 4G/LTE wireless networks. 5G networks are often deployed in dense urban areas to help enhance connectivity and boost capacity for customers. These low-powered radio access nodes typically have a coverage ranging from 30 to several hundred feet and are the solution to current network congestion.

Senate Bill 239 lays out a consistent and efficient application and permit process allowing wireless providers to make the necessary investment in updating infrastructure for the deployment of 5G. Wisconsin is the last state in the Midwest to adopt laws defining 5G wireless distribution and unless the legislature acts soon, Wisconsin stands to lose further investment dollars.

Foxconn passed on Minnesota, Iowa, Illinois, Indiana, Michigan and Ohio to develop in Wisconsin and yet we are the doughnut hole in the Midwest in terms of the 5G service they will depend on. To ensure, smart cities, virtual reality, autonomous vehicles and other technologies are available in the near future, Wisconsin must adopt and implement SB 239.

The bill streamlines and standardizes the rules that will accelerate the deployment of small cell technology in Wisconsin – helping pave the way for future high-speed wireless connectivity, which promises to be 10 to 100 times faster than current wireless speeds.

Based on the rules adopted by the Federal Communications Commission, SB 239 includes fair and consistent rules simplifying the process and allowing companies to quickly deploy small cell technology and bring advanced wireless infrastructure to Wisconsin.

As a result, 5G is expected to rollout in the Wisconsin market later this year and address increased capacity demands from consumers. By 2021, the number of 5G connections is forecast to reach a figure between 20 and 100 million. Spending on 5G mobile infrastructure for that same year is forecast to be at around \$2.3 billion.

Macro cell tower language is incorporated into this legislation with setbacks equal to the length of the tower's height, so a 200 foot tower would have a 200 foot setback from the property line. In addition, language was added to expand municipal authority to apply setback requirements on macro cell towers. Finally, it provides an ability for local neighborhoods to have more control over the macro towers in their communities.

Finally, I believe it is our job as legislators to allow innovation and emerging technologies to prosper and to be welcome in our state and this legislation continues Wisconsin as a technology leader in the Midwest.

Thank you Mr. Chair, I ask for your support of this legislation and I am happy to take any questions.

FCC: <https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety#Q15>

“As discussed above, radiofrequency emissions from antennas used for cellular and PCS transmissions result in exposure levels on the ground that are typically thousands of times below safety limits. These safety limits were adopted by the FCC based on the recommendations of expert organizations and endorsed by agencies of the Federal Government responsible for health and safety. Therefore, there is no reason to believe that such towers could constitute a potential health hazard to nearby residents or students.”

World Health Organization: <https://www.who.int/peh-emf/publications/facts/fs304/en/>

“Recent surveys have indicated that RF exposures from base stations and wireless technologies in publicly accessible areas (including schools and hospitals) are normally thousands of times below international standards . . . From all evidence accumulated so far, no adverse short- or long-term health effects have been shown to occur from the RF signals produced by base stations.”

American Cancer Society: <https://www.cancer.org/cancer/cancer-causes/radiation-exposure/cellular-phone-towers.html>

“At ground level near typical cellular base stations, the amount of RF energy is thousands of times less than the limits for safe exposure set by the US Federal Communication Commission (FCC) and other regulatory authorities . . . Some people have expressed concern that living, working, or going to school near a cell phone tower might increase the risk of cancer or other health problems. At this time, there is very little evidence to support this idea.”

National Cancer Institute: <https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/cell-phones-fact-sheet>

“... although many studies have examined the potential health effects of non-ionizing radiation from radar, microwave ovens, cell phones, and other sources, there is currently no consistent evidence that non-ionizing radiation increases cancer risk in humans.”

Government of Canada: <https://www.canada.ca/en/health-canada/services/consumer-radiation/safety-cell-phones-cell-phone-towers.html>

“The Panel has concluded that the balance of evidence at this time does not indicate negative health effects from exposure to RF energy below the limits recommended in the Safety Code.”

European Commission: Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR): http://ec.europa.eu/health/scientific_committees/emerging/docs/scenihr_o_041.pdf

“Overall, the epidemiological studies on mobile phone RF EMF exposure do not show an increased risk of brain tumours. Furthermore, they do not indicate an increased risk for other cancers of the head and neck region.”

The Food and Drug Administration (FDA):

<https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm624809.htm>

“Based on our ongoing evaluation of this issue, the totality of the available scientific evidence continues to not support adverse health effects in humans caused by exposures at or under the current radiofrequency energy exposure limits.”

United Kingdom Health Protection Agency Independent Advisory Group on Non-Ionizing Radiation (HPA): <https://www.ncbi.nlm.nih.gov/nlmcatalog/101602435>

“In summary, although a substantial amount of research has been conducted in this area, there is no convincing evidence that RF field exposure below guideline levels causes health effects in adults or children.”

Swedish Council for Working Life and Social Research: <http://www.fas.se/pagefiles/5303/10-y-rf-report.pdf>

“Extensive research for more than a decade has not detected anything new regarding interaction mechanisms between radiofrequency fields and the human body and has found no evidence for health risks below current exposure guidelines.”

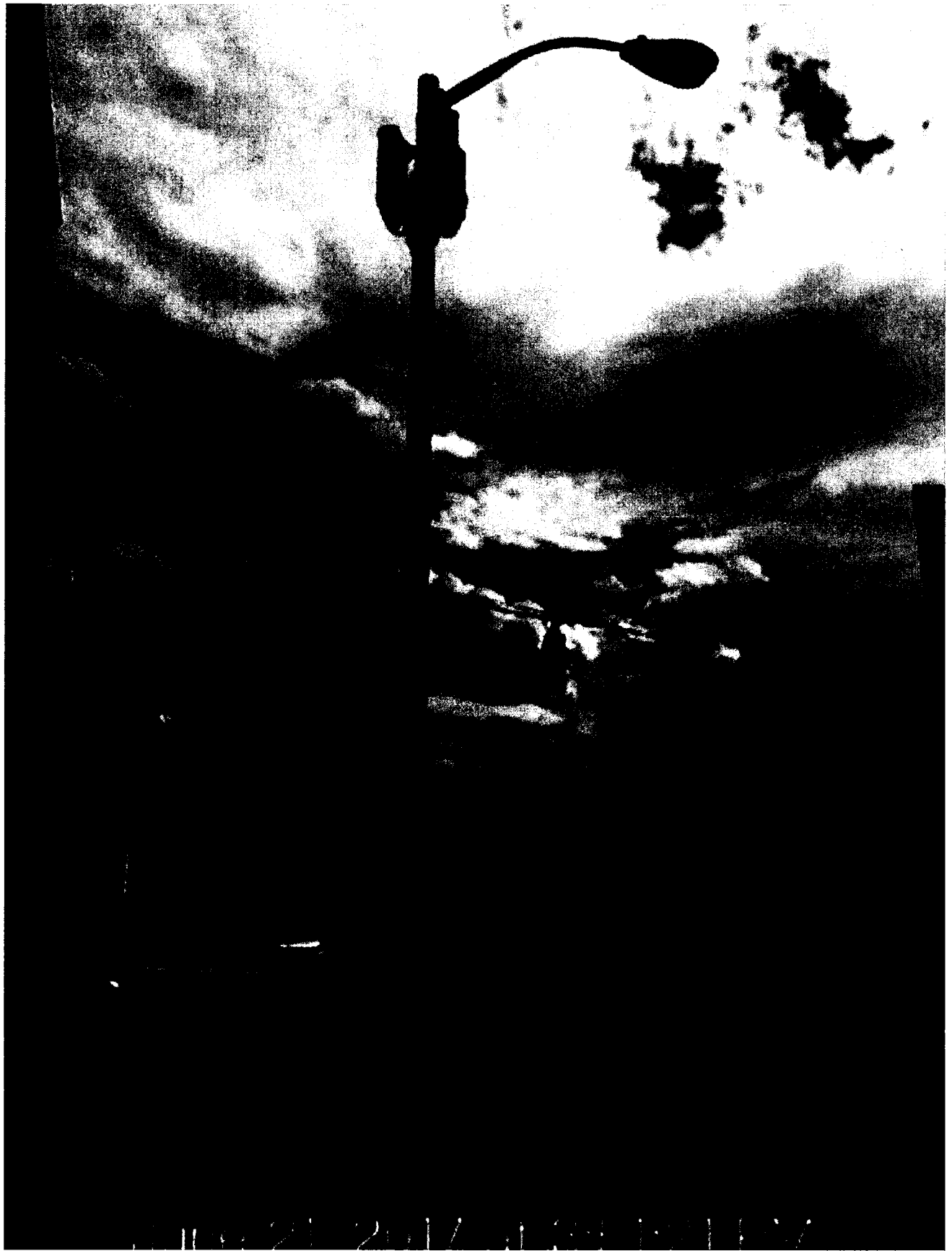
Norwegian Institute for Public Health: <http://www.fhi.no/dokumenter/545eea7147.pdf>

“The studies have been performed on cells and tissues, and in animals and humans. The effects that have been studied apply to changes in organ systems, functions and other effects. There are also a large number of population studies with an emphasis on studies of cancer risk. The large total number of studies provides no evidence that exposure to weak RF fields causes adverse health effects.”

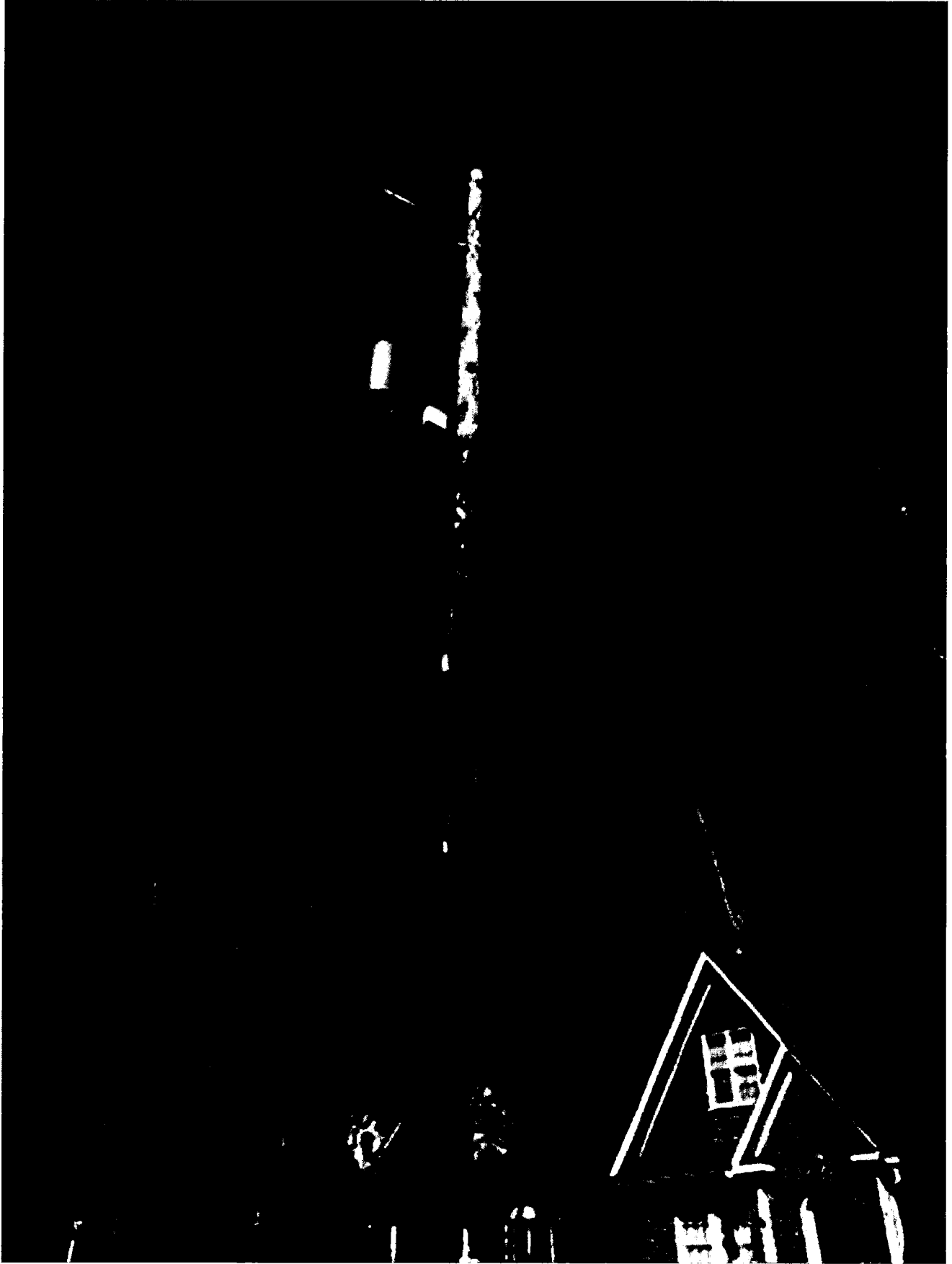
GSMA & MMF: https://www.gsma.com/publicpolicy/wp-content/uploads/2015/03/SmallCellForum_2015_small-cells_and_health_brochure.pdf

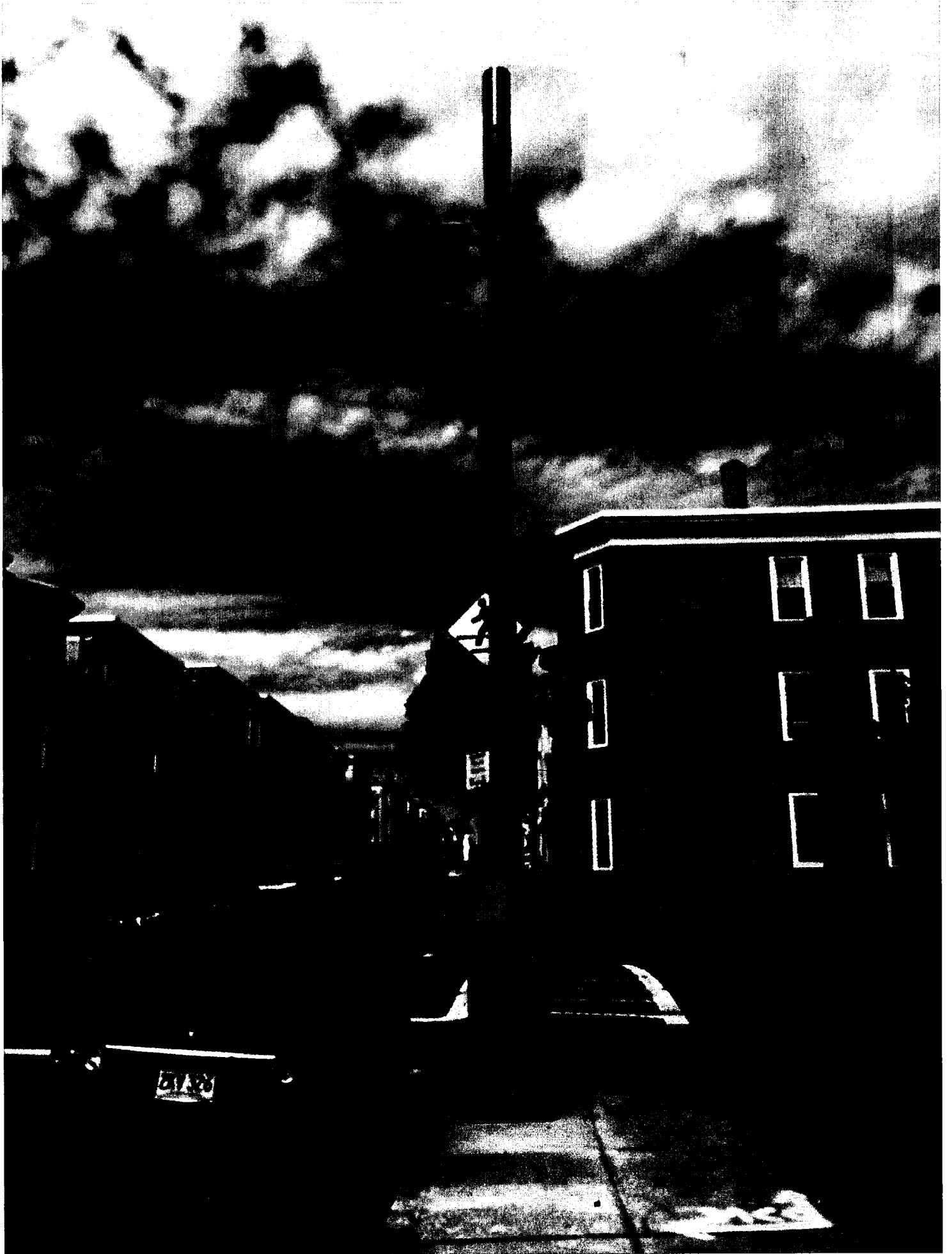
Cellphone Health Facts, “What the Scientific Community Tell Us:”

<http://www.cellphonehealthfacts.com/what-the-science-tells-us>









COMMITTEE ON UTILITIES AND HOUSING

Testimony in Support of SB239 – relating to the regulation of Small Wireless Facilities

Stephanie Cassioppi

U.S. Cellular

May 29, 2019

Chairperson LeMahieu, Vice Chairperson Feyen and members of the Committee, my name is Stephanie Cassioppi and I am the Director of State Regulatory and Legislative Affairs for U.S. Cellular. On behalf of U.S. Cellular and our 1100 employees who call Wisconsin home (about 20% of our workforce), thank you for holding this important hearing and for the opportunity to testify on Senate Bill 239 (“SB239”) relating to the regulation of small wireless facilities (“small cells”).

U.S. Cellular has been providing wireless service in Wisconsin since 1988. We take pride in the strength of our network, in both urban and rural areas of Wisconsin. U.S. Cellular strongly supports the goals of SB239, to facilitate wireless broadband deployment to all Wisconsin residents. SB239 will encourage efficient deployment of small cell wireless infrastructure in the state and enable all the benefits of increased 4G capacity and connectivity, and 5G implementation.

As a wireless carrier with a rural, as well as urban focus, we believe it is important to understand the possibilities and benefits of small cells to all areas of Wisconsin. Small cells augment the traditional wireless macro tower networks. Small cells are often more cost efficient, adaptable, and practical than deploying additional traditional cell towers. Data usage has exploded and created capacity issues on existing networks. Small cells help keep up with consumer demand in these overloaded areas. For example, small cells deployed along a busy highway could alleviate the congestion at the nearby traditional cell towers by offloading and handling wireless communications in the area. As technology evolves and 5G is deployed, small cells will be needed for connectivity as well as enhanced and state of the art data and wireless applications.

While it is likely that small cells will be more pervasive in urban areas, there are certainly rural applications and opportunities that cannot be ignored. Small cells are important to the economic development and vitality of rural areas by providing cost effective alternatives to additional macro cells for new office parks, industrial or agricultural facilities and co-ops that need additional or improved coverage. Small cells can provide needed capacity, or enhanced connectivity, to areas that enjoy seasonal or occasional increases in wireless use, such as college campuses, lakes, county fairs, parks, and sports arenas. And, without a doubt, the enhancement and evolution of technology in all areas of the state is important to public safety.

In summary, **SB239 – relating to the regulation of Small Wireless Facilities**, is essential for Wisconsin. Its passage is vital to enhance the economic viability and lives of all those who call Wisconsin home.

Thank you for the opportunity to testify in support of SB239. On behalf of U.S. Cellular, I strongly urge its approval.



Patrick R. Fucik
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State Legislative Affairs
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**Testimony of Patrick Fucik on behalf of Sprint Corporation
In Support of SB 239
Before the Wisconsin Senate Committee on Utilities and Housing
May 29, 2019**

Good morning Chairman LeMahieu and members of the committee. My name is Patrick Fucik and I am the National Director of State Legislative Affairs for Sprint. Thank you for the opportunity to provide written testimony on behalf of Sprint and our 223 employees that call Wisconsin home in support of SB 239.

I would first like to thank Senator LeMahieu and Representative Kuglitsch for the outstanding job they have done to help advance this legislation. Without their countless hours of shepherding the wireless industry, the League of Wisconsin Municipalities and the various other stakeholders to reach this point, Wisconsin would not be at the forefront of realizing the benefits that 5G technology will provide.

It is clear from the involvement of all the stakeholders that finding common ground on SB 239 was essential to keeping Wisconsin at the leading edge of the latest in wireless infrastructure deployment and the economic development that this deployment will provide. You have heard from the sponsors about what 'small cell' technology is and how its deployment is the future of 5G technology but I wanted to make sure you have a visual as to what a small cell looks like so I have included several pictures at the bottom of my testimony.

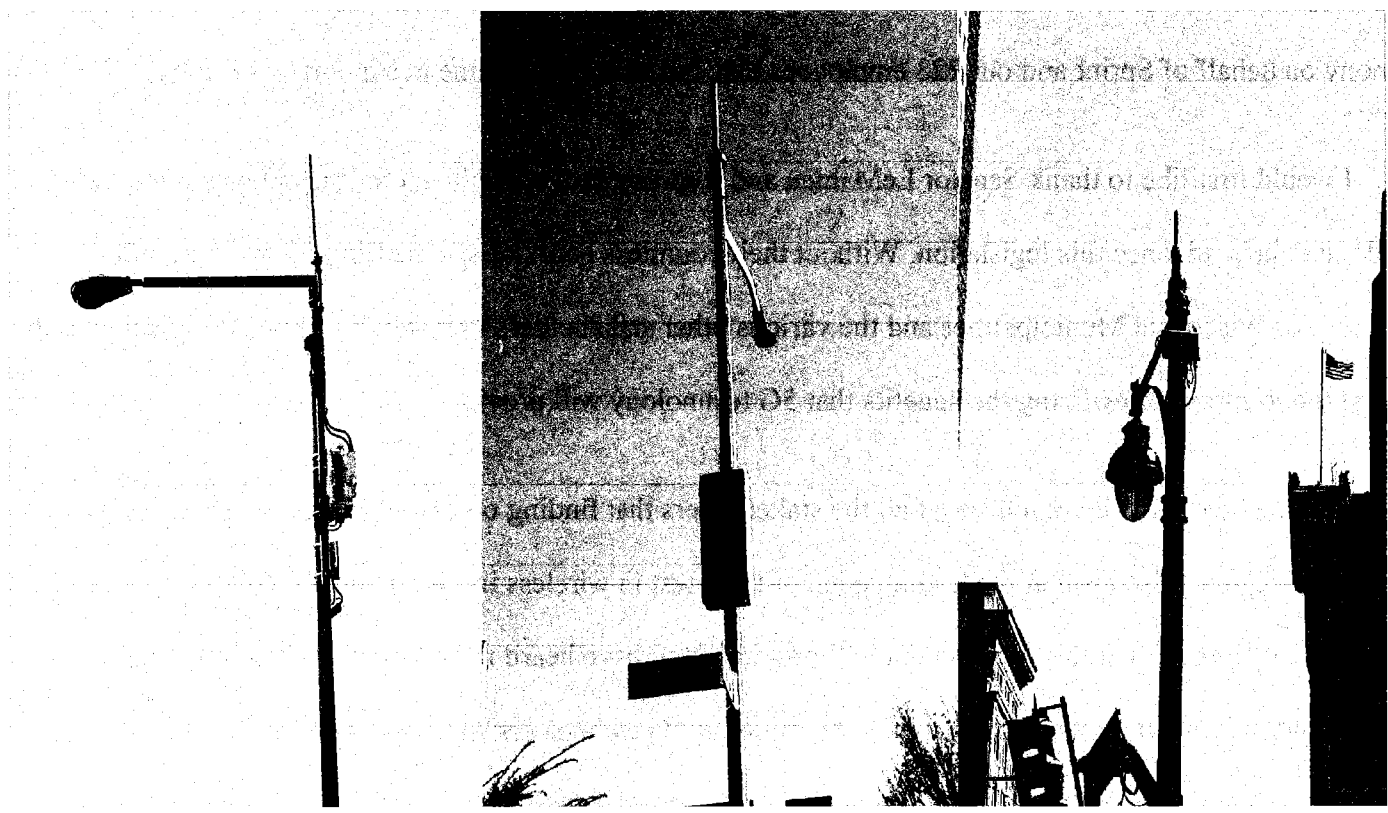
The industry shift to small cell deployment will create a uniform and efficient process for installing small wireless facilities throughout Wisconsin and it is important that the State modernize its current statutes to keep pace with the changes in technology and the way wireless carriers will be deploying 5G technology.

To date, since the 2016 legislative sessions, 25 states have now passed small cell bills – half of the country. The fact that so many states have passed similar legislation provides further evidence that modernizing

state laws to address the latest deployment technologies of wireless providers is paramount to states remaining competitive in the arena of 5G deployment. It is essential that Wisconsin statutes be updated in order to keep pace with the technological advancements that will foster the next generation of wireless network infrastructure using small cells. The passage of SB 239 will ensure that Wisconsin remains competitive in this arena.

It is for these reasons that I respectfully urge you to support SB 239.

Thank you.





Move Forward to a Safe, Healthy, and Prosperous Future in Wisconsin

Phone: 414-423-6292 (landline)

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Protect Property Values: Change State Law to Allow Municipalities & Counties to Provide WIRED Broadband

Broadband internet is being regarded as an essential service, therefore it should be treated as such by state law. Municipal and county governments should be allowed to create entities to provide WIRED broadband service to their residents, just as they are allowed to provide other utility services. WIRED broadband is safer, faster, and more secure than WIRELESS broadband. Even before there was widespread public awareness of the health and environmental risks, studies showed that property values around cell/broadband towers were up to 20% lower than for comparable properties that were not near towers. Since WIRED broadband does not require unsafe and unsightly transmitter towers and is far faster, more energy efficient (<https://whatis5g.info/energy-consumption/>), and more secure, it should be the choice for those looking for a sustainable and healthy future.

Protect Public Health & the Environment: Prohibit Use of Public Funds to Provide WIRELESS Broadband

There is widespread agreement that the FCC limits governing wireless radiation¹ are not biologically-protective for humans or the environment (www.electricalpollution.com/WirelessKillsTrees.html) during the chronic exposures to wireless radiation that we experience today. The Department of Interior, the Environmental Protection Agency, and the American Academy of Pediatrics have gone on record stating that the FCC wireless radiation limits are outdated. The FCC wireless radiation limits were only intended to protect a large male from thermal harm (cooking) during a short-term exposure. Thus, everyone is vulnerable to biological harm, including pregnant women and children, from the ubiquitous chronic wireless radiation exposures that are occurring today. The recent National Toxicology Program (NTP) study found clear evidence of a link to cancer, as have other studies (www.EHTrust.org). The International Agency for Research on Cancer (IARC) has already classified radiofrequency radiation as a Group 2B Possible Human Carcinogen. In March 2019, an IARC advisory panel recommended that the carcinogenicity of radiofrequency radiation be re-evaluated. Some experts are calling for the classification to be changed to Group 1 Carcinogenic to Humans. In which case, public money spent on wireless infrastructure would have been wasted on installation of a dangerous infrastructure that would need to be removed. Additional money would still need to be spent to install WIRED broadband. Thus, no public funding should be wasted on providing WIRELESS broadband anymore. Public funds should be focused solely on providing WIRED broadband which is not only safer, but also faster, more secure, and uses far less energy than WIRELESS broadband.

Restore Copper Landlines to Provide Safe Access to Telephonic Communication & Optimal 911 Service

Wireless devices themselves emit microwave/radiofrequency radiation at levels that were found in the NTP and Ramazzini Studies to cause cancer. The hazard they represent is serious enough that the Italian government was ordered in 2019 by the Italian court to begin a public awareness campaign warning about the health risk posed by cordless phone and cell phone use. France has recalled thirteen cell phone models for exceeding French safety limits (which are even weaker than the FCC wireless radiation limits) when the phones are used as they always are - in contact with the body - against the head, in pockets, bras, socks...(<https://ehtrust.org/new-study-cell-phones-exceed-safety-limits-when-phones-touch-the-body/>). Radiation emitted by wireless technology is harmful to pregnant women and their unborn children. Links have been made to miscarriage, pre-term delivery, and cognitive and behavioral impacts on children (<https://ehtrust.org/science/pregnancy-wireless-and-electromagnetic-fields/>). Current state law allows telecommunications providers to force residents to use dangerous wireless communication because there is no longer a requirement that they properly maintain their copper landline system. The health and safety of Wisconsin residents and the environment necessitate restoring the requirement that telephone companies properly maintain their copper landline systems and provide universal service.

Emergency services are better able to provide timely service to people calling from landlines so people who are prevented from having landline service by their telephone company are therefore also prevented from having optimal emergency services (<http://www.nbcnews.com/tech/security/why-calling-911-your-cell-not-always-good-idea-n99736>). This particularly becomes an issue when the caller cannot provide location information, whether due to age (extreme youth) or incapacitation.

Return Control of Cell/Broadband Tower/Antenna Siting to Local Governments

In light of the inadequate and outdated FCC wireless radiation limits, it is increasingly important that local governments be allowed under state law to take whatever steps are necessary to protect the health of their residents. The state should also stop promoting measures to limit local governments' ability to protect public health, the environment, historical districts, and public interest, like the Broadband Forward! ordinance being promoted by the Wisconsin Public Service Commission.

Ensure Public Health & Safety, the Environment, and Public Interest Are Paramount in Technology Decisions

The Wisconsin Technology Committee should consist of public and environmental health experts, consumer protection advocates, and environmental and biological scientists who are and have been completely independent of the technology industry and who would be charged with vetting any policy advice provided by the Wisconsin Technology Council to ensure that it is in the public interest, namely it provides definite benefits without endangering public health or the environment. The Committee should also be charged with identifying potentially dangerous technology and recommending necessary changes to protect public health and the environment.

Protect Wisconsin by:

Supporting affordable broadband internet access with safe, reliable, secure WIRED infrastructure all the way to the home/premises instead of powerful wireless "small" cell antennas (5G/IoT). Excellent resource: "[Reinventing Wires: The Future of Landlines and Networks.](#)"

<p>Learn More and Take Action: www.ElectricalPollution.com www.WisconsinSafeTech.com www.OconomowocForSafeTechnology.org</p>
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- Ask Sen. Baldwin and Sen. Johnson to support H.R. 530. This Bill would help restore local control to local municipalities by overturning the overreaching Sept. 2018 FCC Order.
- Ask Sen. Baldwin and Sen. Johnson to sponsor/support legislation to repeal Section 704 of the 1996 Telecommunication Act
- Sponsor or support legislation to prohibit use of public broadband funds to install wireless technology, which endangers public health and the environment.
- Sponsor or support legislation to repeal parts of 2011 Act 22 so telecoms are again responsible for repairing copper lines, insuring capacity for landlines which are proven the most reliable emergency communication.
- Sponsor or support legislation to repeal 2013 Act 20 and return power to local governments to regulate the siting of cell phone, WiFi, and broadcast towers.
- Sponsor or support legislation to repeal Wisconsin Statute Annotated § 66.0422 and revise current statutes so communities can readily install WIRED broadband networks.
- Sponsor or support legislation to encourage affordable broadband internet access with safe, reliable, secure WIRED infrastructure all the way to the home/school/business instead of radiation emitting wireless "small" cell antennas.
- Sponsor legislation to change the membership and mission of Wisconsin Technology Committee to protection of public health and the environment and the public interest in vetting policy recommendations put forward by the Wisconsin Technology Council.

¹All wireless devices emit radiofrequency radiation. Modern wireless technology uses pulsed modulated radiofrequency radiation, mostly in the microwave range. There has never been a safe level of exposure to microwave radiation determined in the scientific literature. All of the following use this form of man-made microwave radiation to send and receive data: cell phones, cordless phones, Bluetooth, laptops, Chromebooks, iPads and other tablets, iPods, smartboards, classroom access points, WiFi routers, baby monitors, utility "smart" meters, home assistants, and many gaming systems, hearing aids, pacemakers, vehicles, and wearable devices, as well as cell/broadband towers, including "small" cell antennas for 4G/5G. Note: Other terms often used in association with wireless devices are electromagnetic fields (EMFs), electromagnetic radiation (EMR) and millimeter waves (MMW), and the lay designation - wireless radiation - which we use in this briefing.

Oral Testimony in Opposition to AB 234 and SB 239

May 28, 2019

Catherine Kleiber

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“Grassroots Public Education and Advocacy”
Founder and Director - Author and Webmaster
Independent Researcher

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Please oppose AB 234 and SB 239. The telecommunications industry is motivated by profits above all else, just like other industries that have brought us past public health disasters - lead paint, asbestos, tobacco, radium - so supporting legislation that forces 5G on communities across Wisconsin when the telecom industry has admitted in testimony to Congress that 5G has not been tested for safety is horribly foolish and does not serve the interests of the state.

AB 234 and SB 239 remove communities' remaining rights to protect public health and the environment and also any remaining rights to charge the telecommunications industry fair market value for the use of public infrastructure and right of ways. A little research will show you that AB 234 and SB 239 are essentially the same as laws being promoted by the telecom industry for their monetary benefit and to facilitate the easy rollout of 5G across the country by steamrolling local governments that would otherwise try to protect their residents' health and their local environment.

More and more studies are finding that exposure to wireless radiation is hazardous to public health. The recent U.S. National Toxicology Program study looking at wireless radiation found “clear evidence of cancer” and DNA breakage. The Ramazzini study replicated the National Toxicology Program study at lower levels of exposure and also found that wireless radiation is carcinogenic. Another replicated study found that wireless radiation is a cancer growth promoter. The advisory panel to the International Agency for Research on Cancer (IARC) has recommended that IARC re-evaluate wireless radiation (which is already a Group 2B - possible human carcinogen) for carcinogenicity. Independent experts are calling for it to be classified as Group 1 - carcinogenic to humans.

Wireless radiation has been shown to have serious neurological and cardiac effects. It causes oxidative damage, endocrine disruption, inappropriate activation of voltage-gated ion channels, changes in enzyme function, and is pro-inflammatory. A recent study provides evidence that exposure to wireless radiation may cause premature labor and delivery.

The legislature should not be forcing such a dangerous environmental pollutant on communities across Wisconsin.

AB 234 and SB 239 open the State of Wisconsin to increased liability since no insurance company provides liability insurance for the health and environmental effects of wireless radiation, except possibly as a costly special rider. This is because the science showing that wireless radiation is a health hazard is so

strong. The Wisconsin legislature should take this as a sign that they do not want to take on this liability either.

Finally, studies show broadband/cell tower installations lower property values up to 20%. These studies were done before most people were aware of the health hazard they pose, so the devaluation will only increase as more and more people become aware. Ultimately, properties near towers, including "small cells" may become unsaleable. AB 234 and SB 239 discriminate against lower income neighborhoods by exempting neighborhoods zoned as solely single family. If the technology is undesirable in single family neighborhoods, nobody should be forced to have it.

For all these reasons, you should all oppose AB 234 and SB 239.

The legislature should be seeking to minimize the presence of wireless radiation and warn the public about the hazard it poses. The legislature should repeal 2013 Act 20 which makes it harder for communities in Wisconsin to protect public health and the environment than for communities in other states to do so. The legislature and Governor should ask the Attorney General to challenge the constitutionality of the 1996 Telecommunications Act which has forced hazardous wireless radiation exposures on communities for 23 years. WIRED broadband is safer, more reliable and secure, much faster and much more energy efficient. The legislature should make providing WIRED broadband across the state a priority, earmarking all state broadband funds for WIRED networks only. The legislature also needs to repeal Wisconsin Statute § 66.0422 and revise current statutes so communities can readily install WIRED broadband networks. Community broadband networks have been very successful in numerous locations, providing very high quality internet at a very reasonable rate using fiber to the premises and acting as an engine for economic development.

Thank you for your time. Please vote against passing AB 234/SB 239 out of committee.

Please take time to read my written testimony (sent by email) which contains links to references and websites.



May 29, 2019

The Honorable Devin LeMahieu
Chair, Senate Utilities and Housing Committee
Room 409 South
State Capitol
PO Box 7882
Madison, WI 53707

The Honorable Dan Feyen
Vice-Chair, Senate Utilities and Housing Committee
Room 306 South
State Capitol
PO Box 7882
Madison, WI 53707

RE: Support SB 239 – Streamlined Deployment of Small Wireless Facilities

Dear Chair LeMahieu and Vice-Chair Feyen,

On behalf of CTIA, the trade association for the wireless communications industry, I am writing to express strong support for SB 239, related to the efficient and streamlined deployment of small wireless facilities. This legislation creates a critical framework to promote job creation, economic investment and opportunity throughout Wisconsin.

The people of Wisconsin continue to demand – at increasing levels – access to wireless products and services. This is demonstrated by the fact that there are more wireless devices as there are people in Wisconsin.¹ In addition, over half of Wisconsin residents live in wireless-only households.² These demands from customers, which includes the residents and businesses of Wisconsin, require that wireless networks be both updated to meet the existing demand and readied for the next generation of wireless services.

Specifically, the existing rules governing wireless networks are designed for wireless facilities that can be up to 200 feet tall or more. Tomorrow's networks will rely on new small cell technology which will be placed on structures such as utility poles and streetlights. These new networks need

¹ FCC, Voice Telephone Services Report: Status as of June 30, 2017, at <https://www.fcc.gov/voice-telephone-services-report>, last accessed 5/24/2019.

² CDC, National Center for Health Statistics, https://www.cdc.gov/nchs/data/nhis/earlyrelease/Wireless_state_201903.pdf, last accessed 5/24/2019.



new rules and SB 239 establishes an updated common sense framework to facilitate millions of dollars in new investment in Wisconsin.

Small cells will provide needed additional capacity to accommodate growing consumer demands and help connect 100 times more devices. In a few short years, nearly everything will be connected to ubiquitous wireless networks at speeds up to 100 times faster than today, thanks to the framework established by SB 239. Small cells will help unlock new 5G services from remote healthcare solutions to autonomous cars. Wisconsin's communities will be smarter and more connected, and entire sectors, from public safety to tourism, to transportation, will be transformed.

Accenture has found that 5G and small cell deployments will provide tremendous economic benefits. Specifically, Accenture estimates that wireless operators will invest as much as \$275 billion nationwide over seven years creating up to three million jobs and adding approximately \$500 billion to the U.S. GDP through direct and indirect potential benefits.³ In Wisconsin, 5G deployment in a community like Milwaukee may create over 5,500 jobs and increase GDP by over \$900 million, and a community like Oshkosh may create over 600 jobs and increase GDP by over \$100 million.⁴

In 2018, the Federal Communications Commission (FCC) recognized the importance of winning the global race to 5G and the need to expedite the deployment of small wireless infrastructure to help reach that goal. With its issuance of the State and Local Wireless Infrastructure Declaratory Ruling and Third Report and Order (Order), the FCC set guardrails – including clear timelines and cost-based fees – around state and local siting practices.⁵ These reforms are timely and necessary, and they provide clarity to both communities and applicants while respecting the important role that states and localities continue to play in the siting process.

While the FCC's leadership in this action and others is critical, there is a key area the Order does not address that SB 239 does, notably "permitted use" and deemed granted. The "permitted use" construct ensures that a zoning hearing is not required for every submitted small cell application. A zoning hearing for every small cell application would drain local resources and treat small cells like 200-foot macro cell towers, thereby delaying deployment, and more importantly, delaying the benefits of enhanced wireless services and 5G for the citizens of Wisconsin. Additionally, SB 239 includes provisions providing for a deemed granted remedy. This provision ensures that inaction on an application does not delay deployment of small wireless infrastructure.

³ "How 5G Can Help Municipalities Become Vibrant Smart Cities," Accenture Strategy, Jan 12, 2017, https://newsroom.accenture.com/content/1101/files/Accenture_5G-Municipalities-Become-Smart-Cities.pdf, last accessed 5/24/2019.

⁴ *Ibid.*

⁵ See <https://docs.fcc.gov/public/attachments/FCC-18-133A1.pdf>; last accessed 5/24/2019.



In closing, over the past three years, twenty-five (25) states – including all surrounding states of Michigan, Minnesota, Iowa and Indiana – have enacted statewide small cell legislation providing for streamlined and efficient processes for the deployment of small wireless facilities. Appropriate siting and land use regulation will facilitate and encourage capital investment. Enactment of SB 239 will send a signal that Wisconsin is ready for these investments.

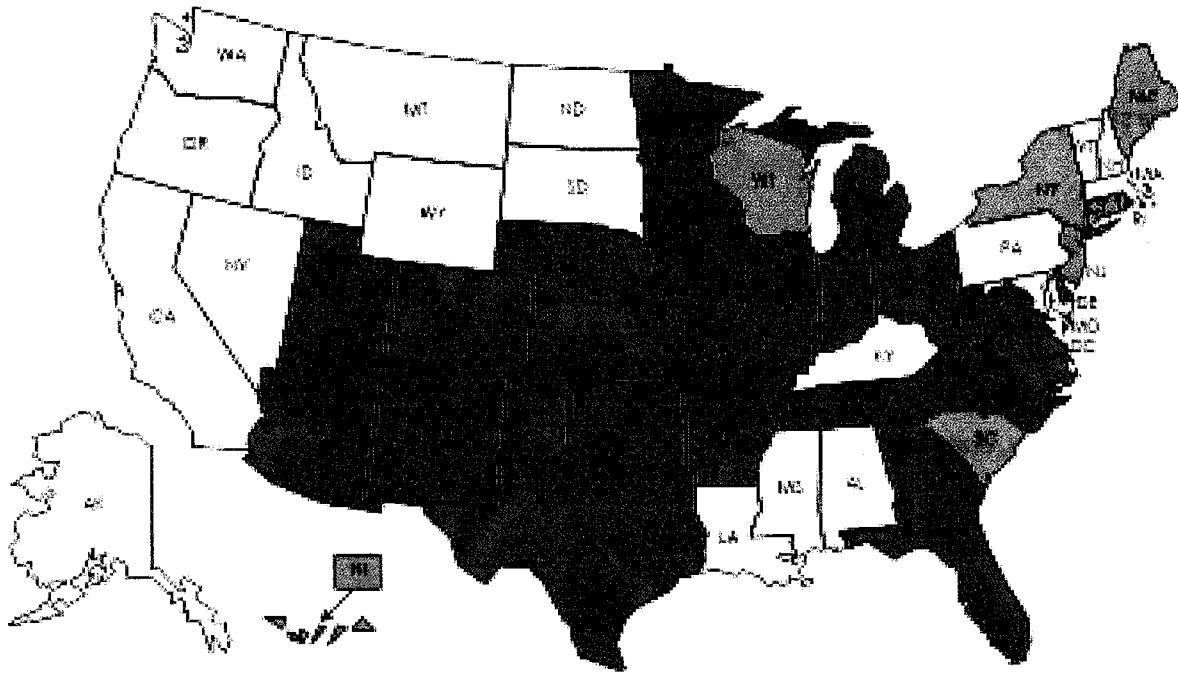
We strongly and respectfully urge the passage of SB 239.

Sincerely,

Gerard Keegan
Vice President, State Legislative Affairs
CTIA



State Small Cell Legislative Activity



Key

- Enacted Small Cell Legislation
- Pending Small Cell Legislation (as of 5/23/2018)

Puerto Rico





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www.physicsandastronomy.pitt.edu

May 29, 2019

Re: Health Effects of 5G Telecommunication Infrastructure

I have been asked by the CTIA to address any concerns over possible health effects related to 5G telecommunication infrastructure.

My name is Eric Swanson. I am a professor of theoretical physics at the University of Pittsburgh. I have published more than 100 papers on biophysics, nuclear physics, and condensed matter physics and given approximately 250 academic talks in 25 countries over a thirty year career. I am the founder of the American Physical Society Topical Group on Hadronic Physics and an elected Fellow of the American Physical Society. I am also the author of *Science and Society* (Springer), *Applied Computational Physics* (Oxford University Press), and many newspaper and magazine op-eds and articles.

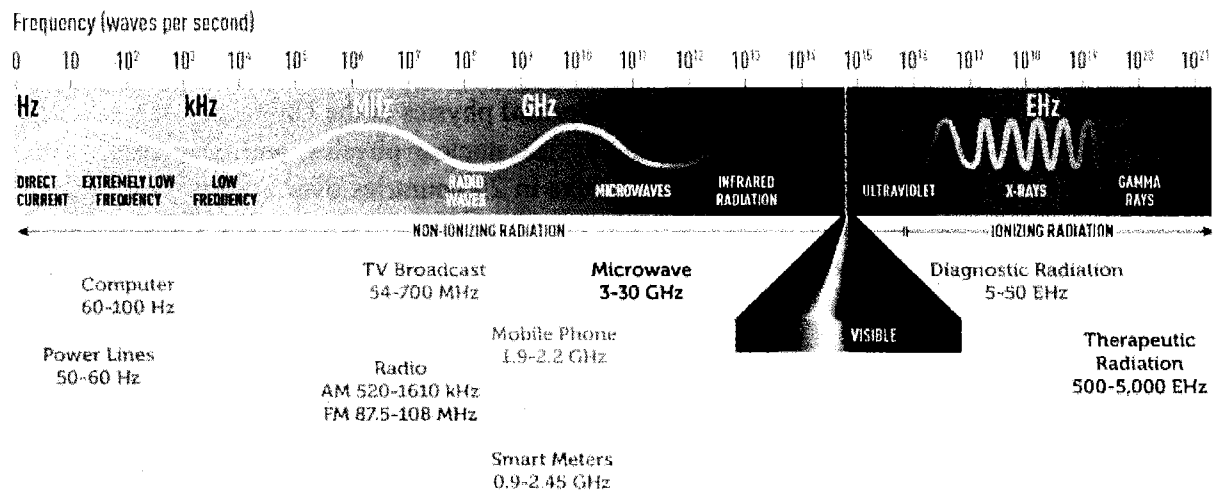
Because this report will be addressing issues concerning electromagnetic fields I would like say a few words about what this is. Electromagnetic fields are waves that are created by moving charges (usually electrons) that traverse space at the speed of light. These waves are the *simplest phenomena known in the universe* and the physics related to them is well established. Waves only have three basic characteristics: frequency (how many times the wave oscillates per second), amplitude (the "height" of the wave), and polarization (we are most familiar with this via polaroid sunglasses). The figure below shows the "electromagnetic spectrum", which is just a representation of the names that we apply to different frequencies of radiation. Notice that visible light is part of the spectrum. Other familiar parts are UV radiation at slightly higher frequency than visible light, x-rays at even higher frequency, and microwaves and radio waves at lower frequency.

When it comes to human health concerns there is an important distinction between different parts of the spectrum. While I could explain this in terms of physical concepts, it is probably more useful to appeal to things we all know. UV radiation can be harmful because it can cause sunburns and skin cancer. X-rays and the higher frequency gamma rays can be even more harmful (at sufficient doses X-rays can cause cancer and gamma rays can kill people outright). Alternatively, we can happily spend days or months under indoor lighting with no chance of getting sunburn or skin cancer. The reason for this is that visible light is *below* the threshold frequency for causing damage to molecules in our cells. This threshold is referred to as the ionization threshold: electromagnetic waves that can break DNA bonds are called *ionizing* and

electromagnetic waves that cannot break bonds are called *nonionizing*. The electromagnetic fields emitted by a cell phone and wireless infrastructure are nonionizing radiofrequency (RF) fields.

The frequencies used by 4G cellphones are around 2 GHz (this means two billion oscillations per second). These frequencies are about one million times lower than UV frequencies, which places them well on the safe side of the ionization threshold. 5G cellphones and infrastructure operate at RF frequencies that are approximately 30000 times below the ionizing threshold.

ELECTROMAGNETIC SPECTRUM



In the USA, 5G wireless infrastructure and 5G-capable cellphones are regulated by the Federal Communications Commission. All new equipment is tested and must comply with safety limits that have been set by the FCC. The FCC adopted the RF emission regulations based on standards recommended by international standards setting bodies such as the National Council on Radiation Protection and the Institute of Electrical and Electronics Engineers. It did so after consulting with federal health and safety organizations such as the FDA, Environmental Protection Agency, Occupational Safety and Health Administration, and National Institute for Occupational Safety and Health to develop “consensus” regulations. Together, these bodies have assessed thousands of scientific studies concerning possible health effects of nonionizing radiation. Animal tests and other studies indicate that thermal effects start to be felt at an energy deposition rate of approximately 100W/kg (this is called the *specific absorption rate*, or SAR)¹. The FCC mandates that the general public be exposed to no SARs greater than 1.6 W/kg. In fact, according to the FCC, typical exposures near cellphone towers are hundreds or thousands of times lower than this figure. The FCC also mandates that *maximum permissible*

¹ For comparison, the heating pad I use to warm my arthritic knees is rated at 50W. I estimate it warms about 1 lb of my body, so this rather pleasant heating corresponds to a SAR of 100W/kg.

exposure (called MPE, this is a measurement of the energy deposition rate by area) be lower than approximately 1 mW/cm².²

The consensus of the world-wide health and government health and safety organizations is that non-ionizing fields at the levels allowed by the FCC regulations are safe. For example, federal agencies responsible for regulating the safety of cell phones and wireless infrastructure and leading cancer and health research institutions in the United States have not found any link between electromagnetic fields allowed by the FCC regulations and cancer or other adverse health effects:

The Federal Communications Commission (FCC): “As discussed above, radiofrequency emissions from antennas used for cellular and PCS transmissions result in exposure levels on the ground that are typically thousands of times below safety limits. These safety limits were adopted by the FCC based on the recommendations of expert organizations and endorsed by agencies of the Federal Government responsible for health and safety. Therefore, there is no reason to believe that such towers could constitute a potential health hazard to nearby residents or students.”³

The Food and Drug Administration (FDA): “Based on our ongoing evaluation of this issue, the totality of the available scientific evidence continues to not support adverse health effects in humans caused by exposures at or under the current radiofrequency energy exposure limits.”⁴

National Cancer Institute: “... although many studies have examined the potential health effects of non-ionizing radiation from radar, microwave ovens, cell phones, and other sources, there is currently no consistent evidence that non-ionizing radiation increases cancer risk in humans.”⁵

American Cancer Society: “At ground level near typical cellular base stations, the amount of RF energy is thousands of times less than the limits for safe exposure set by the US Federal Communication Commission (FCC) and other regulatory authorities ... Some people have expressed concern that living, working, or going to school near a cell phone tower might increase the risk of cancer or other health problems. At this time, there is very little evidence to support this idea.”⁶

Other worldwide health and safety organizations are in accord:

² FCC 13-39 (March 2013), Appendix A.

³ FCC RF Safety FAQ <https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety#Q15> (last accessed March 11, 2019).

⁴ FDA Statement, Statement from Jeffrey Shuren, M.D., J.D., Director of the FDA's Center for Devices and Radiological Health on the National Toxicology Program's report on radiofrequency energy exposure, Nov. 1, 2018, <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm624809.htm>.

⁵ National Cancer Institute, “Cell Phones and Cancer Risk” Factsheet (2019), <https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/cell-phones-fact-sheet> (last accessed March 11, 2019).

⁶ American Cancer Society, “Cellular Phone Towers”, <https://www.cancer.org/cancer/cancer-causes/radiation-exposure/cellular-phone-towers.html> (2018) (last accessed March 11, 2019).

European Commission, Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR) (2015): “Overall, the epidemiological studies on mobile phone RF EMF exposure do not show an increased risk of brain tumours. Furthermore, they do not indicate an increased risk for other cancers of the head and neck region.”⁷

World Health Organization (2006): “Recent surveys have indicated that RF exposures from base stations and wireless technologies in publicly accessible areas (including schools and hospitals) are normally thousands of times below international standards . . . From all evidence accumulated so far, no adverse short- or long-term health effects have been shown to occur from the RF signals produced by base stations.”⁸

Health Canada (2014): “The Panel has concluded that the balance of evidence at this time does not indicate negative health effects from exposure to RF energy below the limits recommended in the Safety Code.”⁹

United Kingdom Health Protection Agency Independent Advisory Group on Non-Ionizing Radiation (HPA) (2012): “In summary, although a substantial amount of research has been conducted in this area, there is no convincing evidence that RF field exposure below guideline levels causes health effects in adults or children.”¹⁰

Swedish Council for Working Life and Social Research (2012): “Extensive research for more than a decade has not detected anything new regarding interaction mechanisms between radiofrequency fields and the human body and has found no evidence for health risks below current exposure guidelines.”¹¹

Norwegian Institute for Public Health (2012): “The studies have been performed on cells and tissues, and in animals and humans. The effects that have been studied apply to changes in organ systems, functions and other effects. There are also a large number of population studies with an emphasis on studies of cancer risk. The large total number of studies provides no evidence that exposure to weak RF fields causes adverse health effects.”¹²

Similarly, the **Institute of Electrical and Electronics Engineers’ International Committee on Electromagnetic Safety (IEEE/ICES)**, which is one of the expert organizations that the FCC

⁷ European Commission, Scientific Committee on Emerging and Newly Identified Health Risks, Opinion, “Health Effects of Exposure to EMF,” (2015) (available at https://ec.europa.eu/health/scientific_committees/emerging/docs/scenihr_o_041.pdf).

⁸ World Health Organization, “Electromagnetic fields and public health: base stations”, (2006), <https://www.who.int/peh-emf/publications/facts/fs304/en/> (last accessed March 11, 2019).

⁹ Health Canada, “A Review of Safety Code 6 (2013): Health Canada’s Safety Limits for Exposure to Radiofrequency Fields,” (2014) (available at https://rsc-src.ca/sites/default/files/SC6_Report_Formatted_1.pdf).

¹⁰ Health Protection Agency, “Health Effects from Radiofrequency Electromagnetic Fields, Report of the Independent Advisory Group on Non-Ionising Radiation,” (2012) (available at <https://www.ncbi.nlm.nih.gov/nlmcatalog/101602435>).

¹¹ Ahlbom A., *et al.*, Swedish Council for Working Life and Social Research, “Radiofrequency Electromagnetic Fields and Risk of Disease and Ill Health: Research during the last ten years,” (2012) (available at <http://www.fas.se/pagefiles/5303/10-y-rf-report.pdf>).

¹² Norwegian Institute of Public Health, Report 2012:3, “Low-level radiofrequency electromagnetic fields, an assessment of health risks and evaluation of regulatory practice, (2012) (available at <http://www.fhi.no/dokumenter/545eea7147.pdf>).

relies on in setting its RF emission standard, analyzed 52 years of studies and concluded that “the weight of scientific evidence supports the conclusion that there is no measurable risk associated with RF exposures”¹³ even at levels five times higher than that permitted by the FCC. In short, *the consensus of the scientific community is that the scientific evidence does not support any link between exposure to regulated RF and adverse health effects.*

5G telecommunication technology seeks to increase data rates by a factor of 100 over 4G networks (to 1Gbps or higher), decrease latency (time wasted in establishing communication) by a factor of 50 or more, and increase user density drastically (up to one mobile device per 10 square feet). These capabilities will enable smart city technology, the “internet of things”, mobile service on airplanes, remote medicine, and the machine-to-machine communication required for the robotic cars of the future. It will achieve these things by placing low power small cell wireless infrastructure close together and by employing more of the electromagnetic spectrum (specifically, the spectrum near 30 GHz). Because 30 GHz radiation is nonionizing and the emissions from cell phones and small cell wireless infrastructure are regulated by the FCC’s exposure standards that have withstood the test of time, there is no reason to believe there is a risk of adverse health effects. In addition, one can estimate MPE levels by using published data concerning the size of 5G small cell wireless infrastructure and their power ratings (these are also regulated by the FCC). The result is an MPE that is approximately 500 times below the FCC limit. Thus 5G technology presents no substantial risk to the general public, and certainly does not present risk that current regulations cannot manage.

Sincerely,



E.S. Swanson
Professor of Physics
University of Pittsburgh

¹³ Institute of Electrical and Electronics Engineers, International Committee on Electromagnetic Safety (SCC39), “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz,” (2006).

May 29, 2019 Madison, WI – 5G Bill AB234

BY: CAROL SEIBERT

Thank you for allowing me to speak today. My name is Carol Seibert.

In 2002, Robert Kane, a former senior telecom engineer wrote: *“Never in human history has there been such a practice as we now encounter... with the marketing and distributing of products hostile to the human biological system... by an industry with FOREKNOWLEDGE of those (harmful) effects.”*

Robert Kane’s book Cell Phone Radiation — Russian Roulette:

https://microondes.files.wordpress.com/2010/03/robert_c_kane_cellular_telephone_russian_roulette.pdf

I am NOT **wary or suspicious** of TECHNOLOGICAL ADVANCEMENTS. I have worked CLOSELY with technology FROM 1978 thru today. In fact, in 1980 I was the FIRST WOMAN to run the new ELECTRONIC SCOREBOARD for the Milwaukee Brewers Baseball Team.

I AM Wary And Suspicious however, of a GOVERNING BODY that HAS NOT revisited SAFETY STANDARDS that are **26 YEARS OLD** in light of SCIENTIFIC EVIDENCE that SHOWS MICROWAVE RADIATION causes **biological harm on ALL LIVING THINGS**.

- And I am PROOF OF BIOLOGICAL HARM! In 2014, I became the proverbial “canary in the coal mine” when I developed **RADIATION SICKNESS** (aka **MICROWAVE SICKNESS** or **EHS - Electro Sensitivity**.) Basically, that means I am ALLERGIC to and cannot BE around any wireless radiation including cell phones, cordless phones, fitbits, wireless routers, ‘**smart**’ utility meters, cell towers, etc.
- Wireless Technology triggered severe neurological and hormonal imbalances in **my body and my brain**. When exposed to Microwave Radiation I get crushing headaches, nerve related muscle cramps throughout my body especially my feet and legs; I get heart palpitations, and my eye dermatitis flares up. I have chronic insomnia, eye pain, impaired vision, and brain fog. I am often debilitated with extreme **pain and fatigue** for several days. MR can affect my mood, temperament and personality. MR can even be life threatening, causing a stroke or heart attack. All scientific fact. In fact, I am putting my life in harm’s way by being in this room today.
- For over 6 years, I have been living a physically and emotionally painful, restricted and isolated life, having almost too many losses to count: my health, my home, my career, family and friends, social activities; travel, and **almost all my personal freedoms**: I can NO longer TRAVEL by airplane, train, bus or ship). MR defines WHERE I CAN GO, LIVE, SLEEP; even WHAT I CAN AND CANNOT WEAR on my body (including NO makeup. NO METAL: eyeglasses, jewelry, even MY WEDDING RING...etc!). It ALL HAD TO GO!!
- Going to the doctor, dentist and grocery store are very challenging. Wireless technology has invaded every corner of our lives!
- BUT LOSING TIME WITH MY 11 GRANDCHILDREN IS TRULY THE MOST PAINFUL. I can no longer go to my THEIR EVENTS: dance recitals, football or hockey games, awards ceremonies, XMAS pageants. The

last 5 years I could not attend my granddaughters wedding or another's US Air Force Commissioning; I missed cousins weddings, high school and college graduations!

- I love my family and my grandchildren dearly and AM SO PROUD OF THEM. But not being able to be a part of these Milestones with them is truly HEARTBREAKING. I've not been able to get used to the DISAPPOINTMENT. Its HARD!
- Every day i'm challenged to fight for my survival. And I'm here pleading with you to hear my STORY AND MY PAIN... so that it does NOT one day BECOME YOUR PAIN ... OR THE LOSS of someone you love.
- **SADLY, I AM NOT ALONE with EHS.** At least **3-10%** of the population ARE afflicted with **EHS**. We are all looking for a **SAFE** place to live, but even **OUR HOMES** are being radiated 24/7 by the **UTILITY COMPANY (WE ENERGIES)** with 'smart meters' WITH NO customer OPT OUT options for a non-radiating meter even under the American Disabilities Act? Where is our Government Protection? Why are our human rights being violated? And now you want to put 5G on Lamp Posts near our homes too?? Insanity!
- What's really **FRIGHTENING** IS THAT **MOST PEOPLE do NOT FEEL the effects** of wireless radiation, ever. They may have a **serious health crisis**—Anxiety, Depression, Diabetes, tumor, cancer, heart attack, stroke, etc... but yet **they will not CONNECT THE DOTS** back to **WIRELESS RADIATION** because of the shroud of (Telecom and government) dishonesty UNDER which the **TRUTH** is being kept from the public.
 - **The RISK OF HARM TO pregnant mothers, children, the sick and elderly is even greater.** We will see more birth defects, Autism, cancer, etc.
 - Suicide rates in our teens and Veterans ARE CLIMBING! The survival of ALL living things IS AT RISK!
- **5G WILL HELP JOBS AND THE ECONOMY???** Initially, Maybe. **Long Term--NO!!**
- Ultimately 5G WILL HURT JOBS and the ECONOMY in Wisconsin! Within 5-7 years of 5G rollout.... if not sooner, **SCIENTIST MARTIN PALL PREDICTS total CHAOS:** people will likely continue to get **sicker**, cancers will skyrocket. (look around—they already are!), **productivity** will suffer; **unemployment and disability** will RISE SHARPLY. **HEALTH INSURANCE RATES** WILL INCREASE. **Medicare** will be flooded. Also, because **MICROWAVE RADIATION affects our brain function**, you will likely see **Crime, mental illness, neurodegenerative diseases and suicides** RISE steadily. This is science, not conjecture. This will put a tremendous financial and psychological burden on the state.
- YOU WILL NOT BE ABLE TO TURN BACK THE CLOCK TO REGAIN THE HEALTH OR TRUST OF THE FINE CITIZENS OF THIS BEAUTIFUL STATE!
- **THINK CAREFULLY.** Then PLEASE **VOTE NO** on the 5G bill **AB 234.**

Sincerely and Respectfully,

Carol Seibert
25355 Runyard Way W
Trevor, WI 53179
262-885-5054



MILWAUKEE COMMON COUNCIL

City Hall Room 205, 200 E. Wells Street, Milwaukee, WI 53202 • (414) 286-2221 • Fax (414) 286-3456 • www.milwaukee.gov/council

City of Milwaukee Testimony on SB 239
May 29, 2019
Senate Committee on Utilities and Housing

The City of Milwaukee began working with small cell wireless service providers a few years ago and has negotiated contracts with five different companies to allow for such collocation. These contracts have come with a learning curve in understanding the various companies' needs, while preserving public safety through protection of our facilities. We have diligently worked through adjustments in our processes to allow for this collocation because Milwaukee is excited about the technology and the increased service level it can provide to our community. To date, we have installed over 300 small cell wireless facilities.

To be consistent with our position last session, the City of Milwaukee remains opposed to AB 234/SB 239 mainly on the basic principle that the bill does not allow us to recover our costs. The fees specified in the bill are below our actual and direct costs so we believe taxpayers will be subsidizing the build out of this wireless network. Additionally, the bill nullifies our contracts two years after enactment and the Legislature should not interfere with local government contracts that were negotiated in good faith between two parties.

Since the 2017 bill was introduced, the FCC has issued a ruling over small cell wireless facility deployment. The current bill codifies the fees and rates in the FCC ruling. However, AB 234/SB 239 does not include a provision in the FCC ruling permitting local units of government to exceed the FCC's presumptively reasonable fee limits if the local unit of government is able to demonstrate that such greater fees are a reasonable approximation of costs and non-discriminatory. Current Wisconsin law already dictates that communities cannot charge more than their actual and direct costs to provide a service, it is unnecessary to codify these fees.

Further, the bill creates some additional operational challenges that are heavily weighted in favor of the industry versus local communities. For example, the bill allows the providers to bundle up to 30 locations in one application. If each company submitted 5 applications with 30 locations each, then we only have 10 days to review 750 locations which would be nearly impossible. The make ready provision that allows the companies to complete work over 365 days but only gives the local government 60 days to complete the make ready is unbalanced. The make ready work needs to be coordinated with the installation of the equipment so the time frames should be equal. Under the section where approvals are not required, at a minimum, we would want to receive notification for conducting routine maintenance in the right of way in order to coordinate with any other work that is being done.

I do acknowledge that AB 234/SB 239 is an improvement from the 2017 bill and appreciate the authors' and industry's willingness to include some modifications. Those improvements are: inclusion of a 2% fee escalator, an automatic adjustment to fee caps whenever the FCC adjusts its determination of what fee amounts are presumptively reasonable, authority to regulate the aesthetics and placement in historic districts, and clarifying language in subsection 9 so that local governments can continue to regulate the use of the right of way by communication service providers.

Unfortunately, even with the aforementioned changes the City of Milwaukee cannot support the bill under the basic principles that we should be able to recover our costs so that taxpayers are not subsidizing the wireless service providers and the Legislature should not interfere in our contracts. For these reasons, we ask you to not support AB 234/SB 239. Thank you.

For more information, please contact:

Brenda Wood, Intergovernmental Policy Manager

City of Milwaukee

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414-286-2371(W) 414-339-9054 (cell)



Wireless
Infrastructure
Association

Testimony of

Arturo Chang
State Government Affairs Counsel
Wireless Infrastructure Association

Before the

Senate Committee on Utilities and Housing Chair

Wednesday, May 29, 2019

SB 239 SUPPORT

Dear Chairman LeMahieu and members of the Committee,

Thank you for holding this important hearing on Senate Bill 239 (SB 239). My name is Arturo Chang, and I am State Government Affairs Counsel at the Wireless Infrastructure Association (WIA) testifying in support of this bill. WIA is the principal trade association representing the companies that build, own, and manage wireless facilities in Wisconsin and throughout the U.S. WIA works to support the delivery of advanced wireless services to communities across the country in a responsible and sustainable manner to maintain American leadership in the global race to 5G.

SB 239 is a balanced approach that encourages deployment of small 5G infrastructure while ensuring that localities retain the necessary authority to regulate the continuity of structures being built in the public rights-of-way. A state-wide streamlined approach provides greater predictability that will encourage private investment in these next generation networks. This effort will usher in 5G services that will create jobs, stimulate local economies, and bring efficiencies in local government services, from trash collection to traffic management.

Wisconsin consumers are using more wireless data than ever and are dependent on being connected in their everyday lives. Specifically, over fifty-one percent of Wisconsin



Wireless
Infrastructure
Association

households have “cut the cord” and rely entirely on wireless services.¹ We anticipate that number increasing over the next few years. SB 239 would allow the wireless industry to invest in Wisconsin, which will result in greater infrastructure investment, increased capacity, and advanced wireless connectivity.

Furthermore, 5G will bring many benefits to Wisconsin, including more innovative services and technology for smart cities. Smart cities use electronic data collection sensors for connected services in public safety, public works, telemedicine, autonomous vehicles, and more. For instance, telemedicine expands healthcare services by increasing remote access to treatment. These new innovations and advanced services will make communities safer and more efficient. Recent studies estimate that the wireless industry will invest over \$1.2 billion in deploying small wireless facilities and 5G services that will, in turn, increase Wisconsin’s GDP by over \$2.2 billion and create at least 13,800 new jobs.²

Thank you again, Chairman LeMahieu and members of the Committee, for holding this hearing. WIA appreciates your consideration as it continues to support American innovation in the global race to 5G competitiveness.

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¹ Wireless Substitution: State-level Estimates from the National Health Interview Survey, 2017, CENTERS FOR DISEASE CONTROL – NATIONAL CENTER FOR HEALTH STATISTICS, NATIONAL HEALTH INTERVIEW SURVEY EARLY RELEASE PROGRAM (released March 2019), *available at* <https://bit.ly/2TYU8vK>.

² See The Race to 5G, CTIA – Everything Wireless, 5G Economic Impact for Wisconsin, *available at* <https://www.ctia.org/5g/print?state=WI>.