



## ROCKY MOUNTAINS FOR SAFE TECHNOLOGY

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December 29, 2025

RE: Opposition to FCC 25-276, 25-217, 19-226, 03-137, 13-84, 20-321

To Chairman Carr, Commissioner Trusty & Commissioner Gomez:

The attached materials are submitted in support of comments opposing FCC Docket No. 25-276, Build America: Eliminating Barriers to Wireless Deployment, as well as related dockets listed above.

See attached peer reviewed scientific studies documenting biological and health effects associated with proximity to cell towers, studies demonstrating adverse effects from wireless radiofrequency (RF) radiation emissions such as those emitted by cell tower transmitters and studies reporting cancerous, neurological, reproductive, immunological, and environmental impacts linked to wireless RF radiation exposure.

See attached science submitted from the Naval Medical Research Institute.<sup>1</sup>

Current FCC RF exposure guidelines and compliance testing protocols are not designed to evaluate or protect against these types of adverse effects, as well documented by the

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<sup>1</sup> BIBLIOGRAPHY OF REPORTED BIOLOGICAL PHENOMENA ('EFFECTS') AND CLINICAL MANIFESTATIONS ATTRIBUTED TO MICROWAVE AND RADIO-FREQUENCY RADIATION, Zorach R. Glaser, Ph.D., LT, MSC, USN, Naval Medical Research Institute, 4 October 1971. Second Printing, with Revisions, Corrections, and Additions: 20 April 1972

International Commission on the Biological Effects of Electromagnetic Fields (ICBE-EMF).<sup>2</sup> FCC regulations are based solely on short-term tissue heating and do not address nonthermal, biological impacts.<sup>3</sup>

As Theodora Scarato writes in the above referenced paper, U.S. policy on wireless technologies and public health protection: regulatory gaps and proposed reforms:

“As described by the ICBE-EMF in their paper detailing the inaccuracies of the assumptions underlying FCC and ICNIRP limits, ‘these limits were based on results from behavioral studies conducted in the 1980s involving 40–60-min exposures in five monkeys and eight rats, and then applying arbitrary safety factors...’ (10). The behavioral studies measured the internal temperature at which exposed animals stopped food-seeking behavior. Thus, the SAR limit was not based on risk modeling from long-term carcinogenicity or epidemiological health studies.”

Risk modeling for long-term health effects – both immunological and neurological – are completely absent in the FCC’s Regulatory Standards. This omission threatens the health and well-being of every human being regardless of vulnerability and health status, who falls under the FCC RF Guidelines. The above referenced rules promoted by the FCC will further endanger the health and general well-being of every plant, animal and human within the United States by eliminating what limited zoning practices remain for local municipalities.

FCC Docket No. 25-276 would significantly impair the ability of state and local governments to protect residents from virtually unmitigated wireless RF radiation effects. The concept of “local control” most prominently addressed in 47 U.S.C. § 253 and § 332(c)(7) of the Telecommunications Act of 1996 would be nullified.

## **OPPOSITION TO FCC RULE MAKING NO. 25-276 IN THE FACE OF FCC’S FAILURE TO CONSIDER SCIENCE SHOWING BIOLOGICAL HARM AT NONTHERMAL LEVELS**

Multiple organizations, nonprofits, medical and scientific professionals and individuals encompassing a broad spectrum from the severely disabled to the healthy who simply wish to preserve their own health and/or that of their families and loved ones strongly oppose the proposed rules in FCC Docket No. 25-276. The FCC must preserve the rights and responsibilities of state and local governments to protect the health, safety, and welfare of the communities they serve.

The science is clear. The FCC’s current RF emission guidelines must be revised to protect

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<sup>2</sup> International Commission on the Biological Effects of Electromagnetic Fields (ICBE-EMF). Scientific evidence invalidates health assumptions underlying the FCC and ICNIRP exposure limit determinations for radiofrequency radiation: implications for 5G. *Environ Health* **21**, 92 (2022). <https://doi.org/10.1186/s12940-022-00900-9>

<sup>3</sup> Front. Public Health, U.S. policy on wireless technologies and public health protection: regulatory gaps and proposed reforms, 18 December 2025, Sec. Radiation and Health Volume 13 - 2025 | <https://doi.org/10.3389/fpubh.2025.1677583>

against nonthermal biological effects, cumulative exposures, and exposures from multiple simultaneous RF sources, as clearly articulated in Environmental Health Trust, *et al. v. Federal Communications Commission*, 9 F. 4th 893 (D.C. Cir. 2021).<sup>4</sup>  
<https://law.justia.com/cases/federal/appellate-courts/cadc/20-1025/20-1025-2021-08-13.html>

The FCC has failed to comply with the mandate in that case requiring a reasoned explanation for its 2019 decision to retain outdated RF exposure limits in light of more than 11,000 pages of scientific evidence demonstrating biological effects at exposure levels below the FCC's thermal-only guidelines, as well as hundreds of sworn statements from individuals injured by wireless RF radiation exposure.

The FCC arbitrarily closed Docket 13-84 in December 2019 without changing the 1996 RF exposure limits in the face of the 5G rollout. The FCC must reopen and refresh, taking into consideration the science from December 2019 to the present. Without this new science, provided after the FCC arbitrarily closed Docket 13-84 in early December 2019, any response to the DC Circuit Court of Appeals by the FCC will be incomplete. The FCC must be advised that the science post-December 4, 2019 (some of it submitted with these comments) is not in Docket 13-84. It is relevant and necessary to review this science in order to resolve the questions demanded of the FCC from the DC Circuit Court.

Further, much of the more recent science focuses on cellular biophysics and discrete biological markers that give meaning to much of the early science accumulated by the US Naval Medical Research Institute under Dr. Zorach Glaser. Dr. Glaser's accumulated science should be re-examined in the context of more recent studies. Therefore, the refresh by the FCC must examine science after Docket 13-84 was closed in December 2019 as well as decades of early global science accumulated by the U.S. Navy under Dr. Glaser.

## **HISTORY OF EHT *et al. v. FCC* IS GERMANE**

The Federal Communication Commission set regulatory guidelines, not safety limits – though they have often been perceived as such, for RF emissions in 1996. Since that time and in spite of five generations of advancement in wireless technology, those limits have remained the same for over a quarter of a century. These guidelines now apply to devices and facilities that were not even contemplated in 1996: small cells (5G), Wi-Fi routers, smart meters, smart phones and iPads.

The FCC's 1996 guidelines only protect consumers from adverse thermal effects (temperature change in tissue). They completely ignore evidence of harms<sup>5</sup> from RF radiation at nonthermal levels even though there is a clear biological response.

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<sup>4</sup> Environmental Health Trust, *et al. v. Federal Communications Commission*, 9 F. 4th 893 (D.C. Cir. 2021)

<sup>5</sup> Hardell, L., & Carlberg, M. (2021). Lost opportunities for cancer prevention: Historical evidence on early warnings with emphasis on radiofrequency radiation. *Reviews on Environmental Health*, 36(4), 585–597.  
<https://doi.org/10.1515/reveh-2020-0168>

In 2012 the independent federal watchdog, Government Accountability Office<sup>6</sup> (GAO), issued a report suggesting the FCC's RF exposure limit may not reflect the latest research, and testing requirements may not identify maximum exposure in all possible usage conditions. It was because of this report that the FCC published an inquiry in 2013 to decide whether the guidelines should be reviewed. It opened Docket 13-84 "Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies" for the public to file comments. Thousands of scientific studies and opinions were submitted over the next seven years.

On April 24, 2019, a letter was written by the Food and Drug Administration's (FDA) Dr. Jeffrey Shuren, Director of the Center for Devices and Radiological Health. Shuren is a man who was dogged by conflict of interest claims shortly before his retirement from the FDA. Dr. Shuren's letter gave the FCC the green light on its current guidelines by indicating that the present regulatory limits were sufficient to cover health concerns related to whether wireless systems contributed to cancer. With extremely limited explanation, on December 4, 2019 the FCC adopted the FDA letter's recommendation and decided to keep the 1996 RF radiation limits in place in the face of the 5G rollout, an extraordinarily bold and dismissive move. The FCC then terminated Docket 13-84, initially opened in response to public pressure from the 2012 GAO report suggesting the FCC's current RF exposure limits may not reflect the latest research.

Environmental Health Trust et al. v. Federal Communications Commission was filed by two separate nonprofits within days of each other, Environmental Health Trust (EHT) followed by Children's Health Defense (CHD) on Feb. 2, 2020. Because the cases were so similar, the judge combined them into one case, Environmental Health Trust *et al* v. Federal Communications Commission. EHT and CHD challenged the agency's decision to retain its 25-year-old radio-frequency emissions standards. The lawsuit, called a Petition for Review, contended the Federal Communications Commission's decision was arbitrary, capricious, not evidence-based, an abuse of discretion and in violation of the Administrative Procedures Act (APA).

The petitioners in the case filed 11,000 pages of evidence of harm from 5G and wireless technology which the FCC ignored, including evidence of already existing widespread sickness. The case was argued before the DC Circuit Court of Appeals in Washington DC on January 25, 2021, by W. Scott McCollough.

The U.S. Court of Appeals for the D.C. Circuit published its decision Aug.13, 2021. The court ruled that the FCC failed to consider the non-cancer evidence regarding adverse health effects of wireless technology. The court's judgment stated: "The case [is] remanded to the commission to provide a reasoned explanation for its determination that its guidelines adequately protect against harmful effects of exposure to radiofrequency radiation..."

The FCC can no longer legitimately make claims of safety, even for the general population. In the landmark case, thousands of peer-reviewed studies showing evidence of biological harm

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<sup>66</sup> U.S. Government Accountability Office. (2012). *Telecommunications: Exposure and testing requirements for mobile phones should be reassessed* (GAO-12-771). U.S. Government Accountability Office. <https://www.gao.gov/products/gao-12-771>

below the thermal limit were ignored by the FCC when, in 2019, they chose not to update their 1996 regulatory standards even in the face of new wireless technologies.<sup>7</sup> The Circuit Court of Appeals in Washington D.C. is one judicial level below the U.S. Supreme Court. See attached Panel Opinion.<sup>8</sup> The FCC chose not to appeal to the U.S. Supreme Court.

The Court was concerned that the FCC never took into account the following:

- children
- brain
- central nervous system
- infertility
- pulsation or modulation
- cumulative effect

This is not a comprehensive list of omissions by the FCC, but an important one. The Court determined the FCC, by failing to update their standards set in 1996 in the face of advancing uses of wireless technology, had left the standards where they were in 2019 in an “arbitrary and capricious” manner. That means the FCC allowed the 1996 standards to remain without taking the above listed categories into account any time over the last three decades *without fact or law*, or without both. The Court did not set a deadline for the FCC; now more than four years have passed with the FCC failing to update the current guidelines.

Even though current guidelines remain legally in effect, the Panel Opinion from August 13, 2021, is appropriately critical of the FCC for failing to update the regulatory standards in what is now almost 30 years, in spite of the advancement of five generations of this technology and the implementation of myriad new wireless devices.

The court’s decision exposed the FCC and FDA as captured agencies<sup>9</sup> that have abandoned their duty to protect public health in favor of telecommunication industry profits.

What does a remand by the Court to the FCC mean? According to W. Scott McCollough, “The FCC will have to re-open the proceeding and for the first time meaningfully and responsibly confront the vast amount of scientific and medical evidence showing that current guidelines do not adequately protect health and the environment.”

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<sup>7</sup> “EHT Wins in Historic Decision, Federal Court Orders FCC to Explain Why It Ignored Scientific Evidence Showing Harm from Wireless Radiation,” *Environmental Health Trust* website, Aug. 16, 2021, <https://ehtrust.org/in-historic-decision-federal-court-finds-fcc-failed-to-explain-why-it-ignored-scientific-evidence-showing-harm-from-wireless-radiation/>

<sup>8</sup> *Environmental Health Trust, et al. v. Federal Communications Commission and United States of America*, 9 F.4th 893 (D.C. Cir. 2021).

<sup>9</sup> Alster, Norm, 2015, *Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates*.

At the time of this current submission to the FCC in multiple dockets including but not limited to Docket 25-276, 4 ½ years have passed since the second highest court in the land ordered the FCC to meaningfully and responsibly look at the scientific and medical evidence and consider, in light of that evidence, whether or not the FCC is truly providing protective guidelines for the general public, particularly in the face of the fifth generation (5G) of wireless advancement.

What does this mean to consumers who still must live under the FCC's ancient and clearly obsolete regulatory guidelines? Unfortunately, for now, the regulatory limits remain the same. But the court has required the FCC to honestly and fully review the science before it and justify their guidelines according to the science.

The Courts typically do not like to interfere with federal agency or commission actions. Yet it was inaction on the part of the FCC that triggered the litigation by Environmental Health Trust and Children's Health Defense. And frankly, it is a very low bar that the agencies and commissions must meet. The court only needed to determine that the agency had considered the science to decide in favor of the FCC, yet the court felt the only area in which the FCC had examined the science and rendered a conclusion, even though a very different one than the Plaintiffs, was the science relating to cancer.

The court found that, because the FDA in its capacity of advising the FCC had little regard for the findings of the National Toxicology Program rodent study which the FDA itself had designed, the obligation to evaluate cancer had been fulfilled. There was strong criticism of the FDA's heedless dismissal of the NTP studies cancer findings by Dr. Ron Melnick, the scientist who had expertly designed this study in the first place, and myriad scientists including Hardell and Carlberg (2018) who concurred with Dr. Melnick with respect to the study's findings.<sup>10</sup>

Yet very importantly, the court found the FCC had failed to consider, much less address, the vast science regarding negative impacts to wildlife and the environment, cumulative effect of multiple devices, the particular sensitivities of children, the effects of sophisticated modulation and pulsation, cumulative effect of multiple devices, Electrosensitivity which has been referred to by the US government since 2002 as Electromagnetic Sensitivities, impacts on the brain, neurology, oxidative stress, DNA damage, and male infertility.

The FCC is in charge of setting regulatory standards that the telecommunications industry must follow yet the ceiling on the standards is "set high enough to ignite the sun," according to one telecommunications attorney familiar with both the standards and the case. A touch of hyperbole may have been used, but the point was clear.

The FCC knows the Circuit Court of Appeals cannot enforce a timeline unless close to 5 years have passed since a remand. According to one industry insider following this historic win by the two nonprofits, lawyers and lobbyists for telecom asked the industry-friendly FCC for only one

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<sup>10</sup> Comments on the US National Toxicology Program technical reports on toxicology and carcinogenesis study in rats exposed to whole-body radiofrequency radiation at 900 MHz and in mice exposed to whole-body radiofrequency radiation at 1,900 MHz, Hardell, Lennart, Carlberg, Michael, International Journal of Oncology, 54, 111 – 127, 2018.

thing: time. They wanted time to build out their infrastructure before the FCC may be forced to lower standards.

Those familiar with existing science do not believe that the FCC will be able to justify their arbitrarily high allowable limits based on science that is not manufactured by the telecommunications industry.

### **“POUNDING THE TABLE” & “CHANGING THE GOAL POSTS”**

The Federal Communications Commission is exceedingly well aware of the shortcomings in the science that is not manufactured by the telecommunications industry.

There is an often-quoted legal adage: "If you have the facts on your side, pound the facts; if you have the law on your side, pound the law; if you have neither, pound the table!"

The FCC is pounding the table with Docket 25-276 as well as 25-217, 19-226, 03-137, 13-84 and 20-321 and attempting to move so rapidly and with as much stealth as they can get away with. If they move with blazing speed to eliminate all “barriers” to building out the wireless infrastructure, and if they can do so before return to the DC Circuit Court of Appeals, and certainly before any future rulings by that Court, perhaps the country will not realize 1) the rules of been changed; 2) the infrastructure is being built out or densified under regulatory limits that favor the telecommunications industry; 3) people, wildlife and flora remain unprotected for nonthermal, long-term effects of wireless radiation.

There is another apt adage commonly referred to as “moving the goalposts.” This is a strategy for winning in spite of the facts and the law not being on one’s side. With the present blizzard of federal bills and wireless technology dockets initiating new rulemaking by the federal Communications Commission, the FCC is indeed moving the goalposts. If the FCC changes the rules in the middle of a game or legal argument, it suddenly becomes harder for the other side to win or succeed. Unfair advantage is gained to obtain the desired outcome. “Success” for the FCC’s opponents simply means safer regulatory standards for the United States.

This is part of the capture of the federal agency that establishes, maintains and fails to oversee regulatory limits that favor the telecommunications industry over human beings, flora and fauna.

### **FCC SERVES THE TELECOMMUNICATIONS INDUSTRY, NOT THE PEOPLE**

The FCC’s official mission statements are written in terms of public interest, i.e. for rapid, efficient communications at reasonable charges and with safety and non-discrimination protections.

In reality, the FCC serves the telecommunications industry with a revolving door between the

FCC and the telecommunications industry. “Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates”<sup>11</sup> by Norm Alster expertly details this pattern as an essential operating mechanism of regulatory capture at the Federal Communications Commission.

From Captured Agency, addressing the CTIA – telecom’s main lobby:

The story of an FCC passively echoing an industry determined to play hardball with its critics is worth a further look. The CTIA’s own website acknowledges the helpful hand of government’s “light regulatory touch” in allowing the industry to grow.

Former congressman Dennis Kucinich ventures one explanation for the wireless industry’s success in dodging regulation: “The industry has grown so fast its growth has overtaken any health concerns that may have gained attention in a slow growth environment. The proliferation of technology has overwhelmed all institutions that would have attempted safety testing and standards,” Kucinich said.

This speed applies not only to cell phones and their advancement through five generations of technology but also cell tower infrastructure. FCC Docket No. 25-276 and accompanying documents are part of the hardball tactics and proliferation of technology infrastructure that overwhelms all institutions that would have or could have attempted safety testing and protective standards.

The general public remains unaware of what is swirling around them.

The general public tends to believe that if something is unsafe, our government will tell us. There will be a warning label, recall or a reversal of policy. Few people are aware that health, described as “environmental concerns” in the Telecommunications Act of 1996, cannot be a reason for denial in cell tower permitting and placement. Norm Alster’s “Captured Agency” should be required reading for anybody who thinks we are being protected by our federal government with respect to cell phones and cell towers, as well as other wireless devices.

Similarly, the general public is not at all aware of the fact that the RF radiation standards have not been updated since 1996 and even then, the way the federal government arrived at the standards means some of the most important solutions and unaddressed yet widely held concerns were left on the proverbial cutting room floor.

The agency most concerned about the effects on humans, flora and fauna – the Environmental Protection Agency – was removed from continued electromagnetic radiation (EMR) study, defunded, and their scientists’ voices silenced.

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<sup>11</sup> Alster, Norm, 2015, Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates.

In fact, it is worth returning to Norm Alster's Captured Agency published by Edmond J. Safra Center for Ethics, Harvard University, for insight into why the EPA has been silent and the FCC dominant – the latter an agency that does not employ a single health person even though they are ostensibly in charge of the nation's health when it comes to RF radiation and microwave exposure. From Captured Agency:

The EPA, notably, was once a hub of research on RF effects, employing as many as 35 scientists. However, the research program was cut off in the late 80s during the Regan presidency. Blackman says he was personally "forbidden" to study health effects by his "supervisory structure". He termed it a "political decision" but recognized that if he wanted to continue to work at the EPA he would have to do research in another area.

Blackman is cautious in imputing motives to the high government officials who wanted his work at EPA stopped. But he does say that political pressure has been a factor at both the EPA and FCC: "The FCC people were quite responsive to the biological point of view. But there are also pressures on the FCC from industry." The FCC, he suggests, may not just be looking at the scientific evidence, "The FCC's position—like the EPA's—is influenced by political considerations as well."

Still, the FCC has ultimate regulatory responsibility and cannot indefinitely pass the buck on an issue of fundamental public health. Remarkably, it has not changed course despite the IARC classification of cell phones as possibly carcinogenic, despite the recent studies showing triple the glioma risk for heavy users, despite the floodtide of research showing biological effects, and despite even the recent defection of core industry booster Alex Lerchl. It is the refusal of both industry and the FCC to even acknowledge this cascade of warning signs that seems most incriminating.

Of course, industry behavior goes well beyond pushing for the FCC's willful ignorance and inaction. Industry behavior also includes self-serving public relations and hyper aggressive legal action. It can also involve undermining the credibility of and cutting off the funding for researchers who do not endorse cellular safety. It is these hardball tactics that recall 20th century Big Tobacco tactics. It is these tactics that heighten suspicion that the wireless industry does indeed have a dirty secret. And it is those tactics that intensify the spotlight on an FCC that so timidly follows the script of the fabulously wealthy, bullying, billion-dollar beneficiaries of wireless.

#### **THE FCC SHOULD REFRESH THE SCIENCE (DOCKET 13-84) INCLUDING REVIEW OF PAST SCIENCE ACCUMULATED BY THE U.S. NAVAL MEDICAL RESEARCH INSTITUTE & THE U.S. ENVIRONMENTAL PROTECTION AGENCY**

Not only must the FCC refresh (e.g. update post-December 4, 2019) Docket 13-84 and all related documents including but not limited to 25-276 as well as 25-217, 19-226, 03-137 and 20-321, the FCC should presently take into consideration the US military science gathered at the US Naval Medical Research Institute by Zorach Glaser, PhD, LT, MSC, USNR from the late 1940s

through mid-1976. On October 4, 1971 Dr. Glaser published the following Abstract<sup>12</sup>:

“More than 2000 references on the biological responses to radiofrequency microwave radiation, published up to June 1971, are included in the bibliography.\* Particular attention has been paid to the effects on man of non-ionizing radiation at these frequencies. The citations are arranged alphabetically by author, and contain as much information as possible so as to assure effective retrieval of the original documents. An outline of the effects which have been attributed to radiofrequency microwave radiation is also part of the report.

\*Three supplementary listings bring the number of citations to more than 2300.”

Glaser’s original NMRI Research Report No. 2 (1971, revised 1972) and the May 1976 integrated update with Dr. Glaser along with Patricia F. Brown and Maire S. Brown compiled more than 2,300 references on biological responses to radio-frequency and microwave radiation, subsequently expanded to over 3,700 references included in “BIBLIOGRAPHY OF REPORTED BIOLOGICAL PHENOMENA ('EFFECTS') AND CLINICAL MANIFESTATIONS ATTRIBUTED TO MICROWAVE AND RADIO-FREQUENCY RADIATION: COMPILATION AND INTEGRATION OF REPORT AND SEVEN SUPPLEMENTS”, and eventually nine supplements brought the total number of scientific references to over 4600 separate documents.

From the Seventh Supplement published May 12, 1976, Dr. Glaser wrote:

It is the hope of the author that the updating of this Bibliography will continue to provide guidance to the diffuse and conflicting literature on the biological responses to electromagnetic radiation (EMR) at radio- and microwave-frequencies, with particular reference to the effects of concern to man. Such guidance is needed in the formulation and appraisal of criteria and limits of human exposure to non-ionizing Electromagnetic Radiation, and in the planning and conduct of future research.

Why ignore decades of science, including science showing biological harm at the nonthermal level, accumulated by the US military over more than three decades?

### **A DEEPER LOOK AT HOW TELECOM & MILITARY GOALS FOR RF STANDARDS MAY HAVE INFLUENCED A LABRYNTH OF AGENCY MANEUVERING TO AVOID PROTECTING PEOPLE, WILDLIFE & FLORA FROM NONTHERMAL EFFECTS**

The military science was not ignored entirely, but it wove its way through the standard-setting bodies – primarily ANSI, IEEE and NCRP – over a period of decades so that the end result

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<sup>12</sup> BIBLIOGRAPHY OF REPORTED BIOLOGICAL PHENOMENA ('EFFECTS') AND CLINICAL MANIFESTATIONS ATTRIBUTED TO MICROWAVE AND RADIO-FREQUENCY RADIATION, Zorach R. Glaser, Ph.D., LT, MSC, USN, Naval Medical Research Institute, 4 October 1971. Second Printing, with Revisions, Corrections, and Additions: 20 April 1972

became an elimination of nonthermal and long-term effect observations accumulated by the US military, and in more recent decades, the US Environmental Protection Agency.

The thermal model which currently exists for the United States is based on two assumptions: 1) the only harm occurring as a result of exposure to nonionizing radiation occurs *above* the level of heat; 2) everything below the level of heating is therefore safe.

Both assumptions require a Grand Canyon-like leap of fact and reasoning, and the dismissal of historic and current independent peer-reviewed science.

The American National Standards Institute (ANSI), the International Institute of Electrical and Electronics Engineers (IEEE) and the National Council on Radiation Protection Measurements (NCRP) all played a role in the RF standards we live by today.

All three are set up as 501(c)(3) nonprofits with advisory roles to the US government and its agencies.

To justify disregarding nonthermal effects which the US military and the EPA had already observed, the IEEE – which ultimately revised the earlier standards of American National Standards Institute (ANSI), a private, non-profit organization that oversees the creation and use of voluntary consensus standards in the U.S. – and NCRP – had to ignore early military studies on nonthermal biological effects and further ignore more recent biological effects at nonthermal levels which the Environmental Protection Agency repeatedly chronicled through its own trove of accumulated science (in conjunction with the U.S. Navy).

The EPA moved in the direction of more protective guidance, viewing nonthermal, long-term findings as both an uncertainty and a research priority. Nonthermal-based RF standards were never realized by the EPA before its RF regulatory efforts were halted as relayed by Norm Alster in Captured Agency and ICBE-EMF, among others.

To capture the EPA's position and ongoing concerns related to non-ionizing effects, EPA's November 1993 Comments from Director Margo Oge's Office of Radiation and Indoor Air on FCC 93-142 are a meaningful expression of EPA's concerns about non-ionizing RF exposure. These comments and recommendations argued for more protective, precautionary standards.

Their failure to be incorporated are widely argued to have had an incalculable human cost. Margo Oge, as an engineer, environmental regulator and author, made significant contributions to air quality in the United States. It could justifiably be argued that Oge's November 1993 Comments to the FCC capturing EPA's then-position and ongoing concerns about non-ionizing radiation, including critiques of the ANSI/IEEE reliance on thermal effects and the lack of long-term, whole-body exposure evaluation, could have expanded the improvements she made in air quality throughout the United States.

In 1993, the same year Oge provided critical comments to the FCC recommending modifications to the proposed ANSI/IEEE standard for non-ionizing radiation (RF/EMF)

exposure urging caution and public involvement due to emerging concerns about potential cancer links and further urged recognizing health risks *beyond* just thermal effects, Oge's office published findings that secondhand smoke posed public health risk. The report was delayed due to legal challenges by the tobacco industry but was upheld by the courts in 2002.

One year later, in 1994, Oge became director of the Office of Transportation and Air Quality. Her office issued multiple regulations reducing emissions from heavy-duty trucks, buses, locomotives. The EPA estimates these programs prevent over 40,000 premature deaths annually.

Margo Oge was right on secondhand smoke. She was right again on toxic exhaust from various modes of transportation. Margo Oge was also right on nonthermal, long-term effects from nonionizing radiation according to thousands of peer-reviewed studies Oge was aware of at the time she wrote her comments to the FCC, and thousands more studies that have been produced since that time.

A reasonable query is this: how many lives would have been saved if Director Oge's strong recommendations had been listened to in 1993 when Oge addressed concerns surrounding nonthermal nonionizing radiation in her November 1993 letter to Thomas Stanley at the FCC's Office of Engineering and Technology, attaching the EPA's comments: "Environmental Protection Agency (EPA) Comments to the Federal Communications Commission (FCC) on FCC 93-142, April 1993, Notice of Proposed Rulemaking; Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation."

Margo Oge's comments urging rejection of the ANSI/IEEE 1992 standards, which were adopted in 1996, included the following statements:

This adverse effect level for human beings, four watts per kilogram, is the threshold for a specific biological effect, i.e. behavioral disruption (work stoppage) in nonhuman primates that is associated with an increase in body temperature. Work stoppage, the failure of a food-deprived animal to perform a learned task to gain a food reward, is interpreted to result from thermal stress, caused by the absorption of RF energy, that is sufficiently severe to deter hungry animals from working for the food.

Since the ANSI/IEEE hazard level is an SAR associated with an effect resulting from a known mechanism of interaction (RF heating) that is associated with an increase in body temperature (as is the NCRP hazard level), the ANSI/IEEE C 95.1-1992 standard is based on the thermal effect of RF radiation and, by extension, is protective of effects arising from a thermal mechanism, but not from all possible mechanisms. Therefore, the generalization that 1992 ANSI/IEEE guidelines protect human beings from harm by any mechanism is not justified.

And further, Oge writes:

The 1992 ANSI/IEEE standard states clearly that the distinction between the two

exposure environments is based on the nature of the exposure environment and not on the population type (see IEEE 1991, p. 23). ANSI/IEEE does not allow for any variation in sensitivity to RF radiation. It states that there is no reliable evidence that certain subgroups of the population [such as infants, aged, ill and disabled, persons dependent on medication, persons in adverse environmental conditions (excessive heat and/or humidity), voluntary vs. involuntary exposure] are more at risk than others (IEEE 1991, p. 23.) This conclusion is not in agreement with conclusions in the EPA report "Biological Effects of Radiofrequency Radiation" (EPA 600/8-83-026F, 1984) or in the NCRP Report Number 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields" that the general population has groups of individuals particularly susceptible to heat.

Other contemporary guidelines agree with the NCRP and EPA; the Food and Drug administration (FDA) 1988, National Radiological Protection Board (NRPB) 1991, International Radiation Protection Association (IRPA) 1991, and the International Electrotechnical Commission (IEC) 1993, guidelines define groups of people who are less heat tolerant than others. These include the elderly, infants, pregnant women, and people who are obese, have hypertension, or take drugs such as diuretics, tranquilizers, sedatives or vasodilators that decrease heat tolerance.

The 1992 ANSI/IEEE standard claims that the recommendations protect against harm by any mechanism that is both thermal and nonthermal. It contends that chronic exposure data and information on nonthermal interactions are not meaningful for standards development. While there is general, although not unanimous, agreement that the data base on low-level, long-term exposure is insufficient to provide a basis for standards development, some contemporary guidelines state explicitly that there adverse-effect level is based on an increase in body temperature (NRPB 1993). Furthermore, they do not claim that the exposure limits protect against both thermal and nonthermal effects. EPA does not agree with the claim that the 1992 ANSI/IEEE guidelines protect against effects of any mechanism; we believe that the only claim that can be made is that the 1992 ANSI/IEEE standard applies only to thermal effects and electric shock.

The FCC should not adopt the 1992 ANSI/IEEE standard. There are serious flaws in the standard that call into question whether the proposed use of the 1992 ANSI/IEEE is sufficiently protective.

The 1992 ANSI/IEEE conclusion that there is no scientific data indicating that certain subgroups of the population are more at risk than others is not supported by NCRP and EPA reports.

As described below, in 1995 the EPA was poised to issue RFR limits. Phase 1 would address thermal effects (understood as not including modulation or chronic exposure), and Phase 2 would address biological impacts of modulated and nonthermal exposures. The EPA's work on developing safety limits was halted. That same year, the Senate Committee on Appropriations

cut \$350,000 from the EPA EMF budget, because "the committee believes EPA should not engage in EMF activities."

From Louis lesson, PhD's Microwave News, September/October 1995, P. 5<sup>13</sup>:

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## **Senate Panel: No EMF Work at EPA**

The Senate Committee on Appropriations has cut \$350,000 from the Environmental Protection Agency's (EPA) EMF budget, because, "The committee believes EPA should not engage in EMF activities."

In a September 13 report (No.104-140), the committee also stated: "Section 2118 of the Energy Policy Act of 1992 established a federal program to investigate and report on human health effects from [EMFs]. Congress mandated that this program of research and public communication be managed jointly by the Department of Health and Human Services and the [DOE]. No programmatic role was assigned to EPA, yet EPA has pursued a number of unintegrated activities on EMFs that are of questionable value."

The House committee has already announced plans to cut EPA's low-priority radiation programs, which would include its work on EMFs (see *MWN*, J/A95).

Meanwhile, the EPA is reorganizing; effective October 1, the EMF program is moving to a new division, and Dennis O'Connor, the current EMF team leader, has been reassigned to work on the disposal and cleanup of radioactive waste. No replacement has yet been named.

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As will be explained below, the EPA had 35 scientist accumulating science on the effects of RF/EMF at the time the work was shut down. The next year the Telecommunications Act of 1996 was passed and signed into law. This was the Act that stated it was not legal to deny placement of a tower based on "environmental concerns" which became interpreted as health concerns.

The science accumulated by the military and chronicled by Dr. Zory Glaser at the Naval Medical Research Institute, as well as significantly overlapping science accumulated by the US

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<sup>13</sup> Louis Slesin, Ph.D., "Senate Panel "No EMF Work at EPA," *Microwave News*, Sept./Oct. 1995, at 5.

Environmental Protection Agency referenced by Margo Oge and many others at the EPA who held concerns about biological effects at nonthermal levels and biological effects over time, ran into headwinds as the telecommunications industry saw significant benefits for the military combined with future commercial profits in rolling out wireless infrastructure as unfettered as possible. Margo Oge had repeatedly expressed clear concern about vulnerable groups of individuals which the ANSI/IEEE standards chose to ignore. The FCC urged Congress to accept the 1992 ANSI/IEEE standards. The EPA's concern was silenced by corporate interests, and more quietly, by military interests, as well.

Theodora Scarato's December 2025 paper "U.S. policy on wireless technologies and public health protection: regulatory gaps and proposed reforms," help contextualize how we ended up with the extraordinarily high limits imposed on the US population 24/7:

The EPA also never completed another review of the science on the biological effects after its 1984 report. While fully reviewing the intertwined policy history of powerline frequency EMF and magnetic fields is beyond the scope of this paper, it is important to note that, like RF, federal agencies never developed a safety standard for these lower frequency non-ionizing exposures. Reports on non-ionizing EMFs were drafted and redrafted but never finalized ([97](#), [98](#)). In 1990, the EPA released a draft report that recommended designating powerline-frequency EMFs as "probable human carcinogens" and RFR as a "possible human carcinogen" [[97](#)], p. 1]. This conclusion was deleted from the subsequently released draft, which stated it was inappropriate to compare EMFs to chemical carcinogens and EMFs were a possible, but not proven, cause of cancer in humans ([99](#)). The EPA Science Advisory Board (SAB) and federal agencies repeatedly reviewed the draft, but it was ultimately shelved ([100](#)).

All the while, the U.S. stayed up to date on the ongoing research, including that of the Soviet Union and Eastern Europe. The 1988 Air Force Report on the biological effects of RFR includes an overview of research that found cardiovascular, immunological, and hematological effects, stating, "...exposure to RF/MW radiation is known to have a biological effect on animals and humans. Damage to major organs, disruption of important biological processes, and the potential risk of cancer represent the dangers of RF/MW radiation to living organisms. Pulsed radiation appears to have the greatest impact on biological materials" [[101](#)], p. 2]. Yet in 1991, when IEEE revised the ANSI limits and introduced limits for the general public (see [Table 1](#)), they argued against a larger limit reduction for the general public because "no reliable scientific data exists" showing certain population subgroups are more at risk or that duration of exposure can impact risk ([95](#)). Again, they stated that nonthermal and modulation-specific effects were not meaningfully related to human health.

Importantly, the EPA stated in 1995 that it was poised to issue RFR limits ([102](#)). As shown in the EPA's presentation ([Figure 1](#)), Phase 1 would address thermal effects (understood as not including modulation or chronic exposure), and Phase 2 would address biological impacts of modulated and nonthermal exposures. However, again, EPA's work on developing safety limits was halted. That year (1995) the Senate

Committee on Appropriations cut \$350,000 from the EPA EMF budget, because “the committee believes EPA should not engage in EMF activities” [(103), p. 5]. The U.S. House of Representatives also cut EMF programs. In addition to the budget cuts, several staffers reportedly blamed the dismantling of the research program on senior officials for not wanting to revisit such a controversial subject (98), some of whom then went on to work for the telecommunications industry (104).

**THE FCC IS A CAPTURED AGENCY, THE FCC IS STALLING ON RESPONDING TO THE CIRCUIT COURT OF APPEAL’S MANDATE TO JUSTIFY THE EXISTING RF LIMITS, THE FCC ATTORNEYS ARE CHANGING THE PLAYBOOK TO AVOID RESPONSIBLY PROTECTING THE NATION’S RADIATION EXPOSURE.**

There is no scientific basis upon which a reasoned explanation for retaining these guidelines can be provided. The evidence in the record of EHT *et al.* v. FCC, together with the substantial body of research published since that decision, is compelling and conclusive. The FCC’s RF exposure limits are not biologically based and fail to account for the full range of risks and harms associated with wireless RF radiation exposure at levels currently permitted.

FCC Docket No. 25-276 would accelerate wireless cell tower deployment, increasing the number of cell tower transmitters in communities and, as a result, increase ambient levels of wireless radiofrequency (RF) radiation exposure for residents, workers, flora, and fauna.

As established in the robust record of Environmental Health Trust *et al.* v. FCC, the FCC’s current RF safety guidelines do not protect against all biological and health effects of RF radiation exposure. The court made clear that the FCC failed to adequately consider extensive scientific evidence demonstrating harmful nonthermal effects occurring at exposure levels below the Commission’s existing, thermally based limits.

Wireless cell tower deployment should not be accelerated or even continued, while the serious deficiencies identified in EHT *et al.* v. FCC remain uncorrected.

For more than 4 ½ years, the FCC has ignored a federal appellate court mandate ordering it to review over 11,000 pages of scientific evidence documenting biological and health effects from wireless RF radiation at levels permitted under current FCC guidelines. By failing to comply with this court order, the FCC has demonstrated disregard for public health and has undermined public trust in its ability to make decisions affecting the health and safety of the public.

The 11,000 pages of scientific evidence submitted in EHT *et al.* v. FCC demonstrate that new cell tower transmitters deployed pursuant to FCC Docket No. 25-276 would result in increased involuntary exposure and pose a deleterious public health impact. For this reason, FCC Docket No. 25-276 should be opposed vigorously. To do otherwise is, plainly stated, putting the cart before the horse.

FCC Docket No. 25-276 should not be approved while FCC RF safety guidelines remain

outdated, are based solely on thermal effects, and are known to fail to protect against proven nonthermal biological effects. Further, FCC Docket No. 25-276 and related dockets should not be approved while FCC safety testing continues to exclude nonthermal effects entirely.

Advancing nationwide wireless infrastructure under these conditions places the public, wildlife, and the environment at unacceptable risk.

The FCC's continued noncompliance with the federal appellate court order in *Environmental Health Trust et al. v. FCC* may stem in part from the agency's lack of institutional expertise and competence in matters of biology, medicine, toxicology, and environmental health. The FCC has no in-house scientific capacity or qualified experts in biological or environmental health sciences and therefore lacks the ability to meaningfully assess, evaluate, or manage the risks associated with exposure to wireless radiofrequency (RF) radiation and other electromagnetic fields (EMFs).

The FCC is fundamentally not equipped to engage in health-based risk assessment or risk management for electromagnetic radiation. As a result, responsibility for wireless and other EMF biological and environmental safety should be transferred from the FCC to a federal agency with demonstrated expertise in public health, environmental protection, and biological risk assessment. The FCC's failure to protect public health is structural, not incidental.

This failure may also be attributable to the FCC's documented conflicts of interest. As detailed by the Edmond J. Safra Center for Ethics at Harvard University in *Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates*, the FCC operates under significant regulatory capture by the telecommunications industry. These conflicts help explain why, as documented in multiple petitions in *EHT et al. v. FCC*, the Commission has repeatedly selected safety testing methodologies that do not ensure human or environmental health protection and has relied on outdated and scientifically invalid assumptions to justify its thermal-only RF exposure guidelines.

## **NO ROOM FOR VULNERABLE POPULATIONS IN THE U.S. STANDARDS: THE EXCEPTIONAL RISKS OF IMPLANTED (MEDICAL) METAL**

As the Environmental Protection Agency's Office of Radiation and Indoor Air Director Margo Oge wrote in 1993:

The 1992 ANSI/IEEE conclusion that there is no scientific data indicating that certain subgroups of the population are more at risk than others is not supported by NCRP and EPA reports.

One of those vulnerable groups, perhaps not on Director Oge's radar when she was listing the subgroups of the more vulnerable portions of the population such as children, the elderly, the chronically ill, people on certain medications, are people who have implanted metal.

It is, ironically, the IEEE which excluded vulnerable populations and nonionizing effects in the

1992 ANSI/IEEE standards that now states their safety guidelines exclude individuals with implanted metal. IEEE states: "The defined exposure limits do not necessarily protect against interference of medical devices or problems involving metallic implants."<sup>14</sup>

Approximately 27% – 32% of the population over 40 years of age has implanted metal. This is usually metal that is permanent – intended to remain implanted for the remainder of an individual's life.<sup>15</sup> 27–32% of the U.S. population over 40 is on the order of **35–42 million individuals** as of the mid-2020s. That means somewhere between 10.6% of the population on the low end and 12.7% of the population on the high-end had implanted metal in them as of 2020. The numbers are increasing.

The metal can attract, conduct, concentrate and heat RF/EMF. This is now recognized as a potential hazard in the face of RF/EMF by not only the IEEE and the FCC but also the International Commission on Nonionizing Radiation Protection or ICNIRP.

Both the IEEE and ICNIRP have explicitly stated in their regulatory standards that their general exposure limits to electromagnetic fields (EMF) **do not apply** to people with implanted metal or electronic medical devices.

This means the standards set for others in the general population (as opposed to industrial settings) do not apply to, nor do they protect, people with implanted (medical) metal.

The International Commission on Non-Ionizing Radiation Protection (ICNIRP), the international standard-setting body for Europe, Australia and most of the countries outside the United States, is emphatic in their position that people with implanted metal objects fall outside the protection scope of its general population guidelines for RF/EMF:

The main objective of this publication is to establish guidelines for limiting exposure to EMFs that will provide a high level of protection for all people against substantiated adverse health effects from exposures to both short- and long-term, continuous and discontinuous radiofrequency EMFs. However, some exposure scenarios are defined as outside the scope of these guidelines. Medical procedures may utilize EMFs, and metallic implants may alter or perturb EMFs in the body, which in turn can affect the body both directly (via direct interaction between field and tissue) and indirectly (via an intermediate conducting object).<sup>16</sup>

As medical procedures rely on medical expertise to weigh potential harm against intended benefits, ICNIRP considers such exposure managed by qualified medical practitioners (i.e., to patients, carers and comforters, including, where relevant,

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<sup>14</sup> IEEE C95.6-2002, IEEE Standard for Safety Levels With Respect to Human Exposure to Electromagnetic Fields, 0-3 kHz, IEEE Xplore.

<sup>15</sup> Wang, QF., Tang, YC., Liao, HR. *et al.* Prevalence of metal implants among US adults aged 40 years and older. *Sci Rep* **15**, 584 (2025). <https://doi.org/10.1038/s41598-024-84340-0>

<sup>16</sup> ICNIRP Guidelines For Limiting Exposure To Electromagnetic Fields (100 KHZ To 300 GHZ), HEALTH PHYS 118(5): 483–524; 2020.

fetuses), as well as the utilization of conducting materials for medical procedures, as beyond the scope of these guidelines.<sup>17</sup>

The European Commission reached this conclusion five years ahead of ICNIRP, urging caution. On January 27, 2015, SCHENIR, the Scientific Committee and Emerging and Newly Identify Health Risks for the European Commission, adopted a formal position on “*Potential health effects of exposure to electromagnetic fields (EMF)*”.<sup>18</sup>

### 3.12. EMF effects on implanted medical devices

It is known that people with implanted active and passive medical devices belong to a group that needs special attention when doing risk assessment for exposure to electromagnetic fields. Medical electronic devices—such as pacemakers, and passive metallic implants (orthopaedic prostheses)—implanted in people of working age are increasingly used. EMF, if sufficiently intense, may interfere with electronic medical devices causing malfunction and subsequent injury or illness. Potential interactions include electromagnetic interference, static magnetic fields which may cause displacement of ferromagnetic implants, and time-varying EMFs which may cause electrostimulation or heating of adjacent tissue, depending on the device or implant and the frequency of the fields.

IEEE, ICNIRP and SCHENIR are not alone in sounding the alarm for those who have implanted metal. The FCC, in the First Report and Order Further Notice of Proposed Rule Making and Notice of Inquiry, adopted March 27, 2013, addressed Conductive Implanted Objects: “Electrically conductive objects in or on the body may interact with sources of RF energy in ways that are not easily predicted.”<sup>19</sup>

Thousands of peer-reviewed studies show harm at nonthermal levels. Nonetheless, the FCC, ICNIRP and IEEE standards only take the *thermal effects* into consideration. Even with these more lenient standards that are favorable to the telecommunication industry, any individual with implanted metal falls outside the limits these standard-setting bodies consider safe.

This critical but little-known information about implanted metal and the failure of global standards to protect against internal heating when implanted metal is present in an individual may cause millions of Americans to fall outside global regulatory limits, lax as they are.

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<sup>17</sup> Ibid.

<sup>18</sup> Scientific Committee on Emerging and Newly Identified Health Risks. (2015). *Opinion on potential health effects of exposure to electromagnetic fields (EMF)*. European Commission. [https://health.ec.europa.eu/publications/opinion-potential-health-effects-exposure-electromagnetic-fields-emf\\_en](https://health.ec.europa.eu/publications/opinion-potential-health-effects-exposure-electromagnetic-fields-emf_en)

<sup>19</sup> Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies; Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields, First Report and Order/Further Notice of Proposed Rulemaking and Notice of Inquiry. 13-84, 28 FCC Rcd 3498 (4), 78 FR 33654 (06/04/2013), p 83. <https://www.fcc.gov/document/fcc-review-rf-exposure-policies>

If the Commissioners pass NPRM Docket No. 25-276 and the telecommunications industry continues to push for the removal of “barriers” through legislative means concurrently, more than 1/10 of the United States population will fall outside the existing regulatory framework for “safety” with respect to RF/EMF in the United States. In spite of its flaws and its failure to take into consideration nonthermal and long-term effects, the regulatory standards prohibit the heating of tissue.

What this unfettered rollout of telecommunications towers and antenna under 25-276 will do is put more than 1/10 of the US population at severe risk. The metal implanted in their bodies will attract, conduct, concentrate and potentially heat the metal in their bodies. The cells most at risk are the cells closest to the metal. When healing occurs, cell death may occur. The hottest point of metal will be at the tip of the implanted screws.

For example, if an individual has parallel rods in their spine because of scoliosis or an injury, there are plates and screws that go along with those long rods to hold the metal in place. The tips of the screws that would be facing toward the chest cavity and toward the heart would be the hottest points of the metal. Exposure to RF radiation that another individual – someone without implanted metal – could tolerate may be intolerable for the person with long titanium or stainless-steel rods, plates and screws in their spine, triggering a sudden escalation of the chest cavity temperature causing a chest cavity burn which could trigger coronary spasm resulting in sudden cardiac death.

For those people who find they cannot live with a cell tower in their front yard, a cell tower next to the school they attend, a cell tower next to the place where they shop for groceries or work or worship, they will be “constructively evicted” from not only their homes and places of work and worship but from society as a whole. They may flee to the woods but how many people can make such a profound and sudden forced change to their lives in order to potentially save their lives? And if this is their only recourse, is this not a discriminatory act by the FCC and the federal government?

Indeed, the FCC and the federal government may be committing a potential violation of Equal Protection contrary to the Fifth Amendment (as against the federal government) and the Fourteenth Amendment (as against the state and local governments).

Would these be discriminatory acts by the FCC and the federal government? The FCC is aware of the dangers of implanted metal.<sup>20</sup> Since the discriminatory effect of rolling out cell towers without any local control – a clear threat to people with implanted metal comprising more than 10% of the US population – such an action (a result of Docket No. 25-276 should the commissioners choose to pass it) would not be on the basis of race, religion or sex; therefore, a case brought against the FCC would likely be subject to rational basis review rather than intermediate or strict scrutiny.

In other words, this affected group of individuals with implanted metal (again, more than 10%

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<sup>20</sup> Ibid.

of the population) is not a subject class as traditionally recognized under Equal Protection (race, national origin, religion, and sex get heightened scrutiny). Disability and medical condition generally do not trigger strict or intermediate scrutiny under the federal Equal Protection Clause; they usually get rational basis review.

Under rational basis review, the FCC wins if there is any conceivable legitimate governmental interest such as promoting nationwide communications or closing the digital divide. However, rolling out cell towers where there is already coverage does not promote nationwide communication, it does not close the nonexistent gap in coverage, and if this is in a neighborhood where there is not a “digital divide,” the FCC may have a problem on its hand.

Is the FCC putting people’s lives at risk so that the telecommunications industry can put the cable industry out of business by streaming videos in front of people’s homes for the sake of edging out their competitors in the cable industry to garner the lion’s share of an \$84.7 billion a year (2024) streaming business, and taking over the Internet service market which is valued at over \$500 billion? Residential services accounted for nearly half of the total.

Within the next five years, by 2030, the Internet market is expected to exceed \$875 billion. The rollout of cell towers envisioned by those behind 25-276 may be to capture a significant portion of the home Internet market. Does this mean a cell tower in everybody’s front yard? Would such a move by the telecommunications industry be for a “governmental purpose” or is telecom simply chasing a soon-to-be trillion-dollar home Internet empire? If the courts were to decide the latter, it may be that the rights of the disabled would be upheld by the courts.

Kent Chamberlin, PhD is a science adviser and the president emeritus of the Environmental Health Trust, a nonprofit organization dedicated to scientific research and education on the effects of wireless radiation. He is also an expert on the International Commission on the Biological Effects of Electromagnetic Fields and past chair and professor emeritus of electrical and computer engineering at the University of New Hampshire.

Recently Dr. Chamberlin was interviewed by journalist Suzanne Burdick, PhD for a broader understanding of why telecom, facilitated by the FCC, is pushing to install cell towers and antennas in places that already have good coverage. His answer may surprise many.

“People need to know why towers are being placed in places where they aren’t needed,” Dr. Chamberlin told Suzanne Burdick. “Once people hear about the industry’s motivation — and know the magnitude of that motivation — a lot of things click into place. The aggressive rollout of wireless infrastructure appears to be motivated by corporate greed at the expense of people’s health and security.”

This brings us back to a fundamental issue of whether or not people’s property and Constitutional rights are being violated for legitimate governmental interest such as promoting nationwide communications or closing the digital divide.

It might be difficult to convince the Courts that the FCC assisting telecom in order to make a

play for an \$875 billion market by violating Americans' medical and disability rights is in the name of legitimate governmental interest.

## **AMERICANS WITH DISABILITIES**

Increasingly, Americans are being diagnosed with sensitivity to wireless technology. There are clusters of illness reported around cell towers particularly when they are in close proximity to neighborhoods, and there are myriad reports of people whose neurological and immunological symptoms improve after Wi-Fi routers are turned off, cell phones are turned off or placed in airplane mode, and people switch from wireless to wired devices.

As much as the industry attempts to downplay sensitivity to wireless using language suggestive of psychogenic effects, there are now ICD codes for Electromagnetic Sensitivities, also referred to as Electrosensitivity, radiation sickness and EMR-S or Electromagnetic Radiation Syndrome.

This sensitivity is best defined as a constellation of neurological and immunological symptoms.

Symptoms range from headache, dizziness or vertigo, cognitive impairment, ADHD-like symptoms, "brain fog," memory difficulties, concentration problems, extreme fatigue, inability to stay awake, inability to go to sleep, inability to wake up, non-restorative sleep, exhaustion, asthenia (general weakness or lack of energy), dermatologic symptoms such as burning, tingling, redness, itching, rashes, auditory/vestibular symptoms including tinnitus (ringing in the ears), hypersensitivity to sound, cardiovascular symptoms such as tachycardia (rapid heartbeat), palpitations, cardiac arrhythmia, chest discomfort or pain, variable blood pressure or heart rate, sweating, flushing, gastrointestinal upset, unexplained anxiety or depression, infertility.

Increasingly, doctors are asking for "reasonable accommodations" for individuals who have the option to opt out of smart meters and Wi-Fi classrooms or workplaces. What FCC Docket No. 25-276 will do is make respite for people who suffer from sensitivity to wireless technology impossible if cell towers are built out without restraint, without zoning remedies at the local level, without special zones. To neglect the genuine class of individuals who are particularly vulnerable and not allow respite or remedy is inhumane.

For an individual to qualify as a person deserving of reasonable accommodation, they must meet defined criteria. Nowhere is there a list of accepted and unacceptable maladies. This is the definition of a disability under the ADA in the United States:

### **(1) Disability**

The term "disability" means, with respect to an individual—

- (A) a physical or mental impairment that substantially limits one or more major life activities of such individual;
- (B) a record of such an impairment; or

(C) being regarded as having such an impairment

## (2) Major life activities

(A) In general:

Major life activities including caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, learning, reading, concentrating, thinking, communicating, and working. For some people, this may include more functions.

(B) Major bodily functions

A major life activity also includes the operation of a major bodily functions of the immune system, normal cell growth, digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine, and reproductive functions.

## Resources from federal government & scientists, physicians and recommendations

IEQ Indoor Environmental Quality<sup>21</sup>:

[https://web.archive.org/web/20060714175343/ieq.nibs.org/ieq\\_project.pdf](https://web.archive.org/web/20060714175343/ieq.nibs.org/ieq_project.pdf)

EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses<sup>22</sup>: [https://www.researchgate.net/profile/Igor-](https://www.researchgate.net/profile/Igor-Belyaev/publication/305689940)

[Belyaev/publication/305689940](https://www.researchgate.net/profile/Igor-Belyaev/publication/305689940) EUROPAEM EMF Guideline 2016 for the prevention diagnosis and treatment of EMF-related health problems and illnesses/[links/59f2dafaeca272cdc7d0312c/EUROPAEM-EMF-Guideline-2016-for-the-prevention-diagnosis-and-treatment-of-EMF-related-health-problems-and-illnesses.pdf?origin=publication\\_detail](https://www.researchgate.net/profile/Igor-Belyaev/publication/305689940)

National Institute of Building Sciences (NIBS), Indoor Environmental Quality (IEQ) Final Report (July 14, 2005), ©2005, National Institute of Building Sciences. A web-based version of the NIBS IEQ Final Report is available at <https://www.access-board.gov/research/building/indoor-environmental-quality/>.

ICD: The Centers for Disease Control's 2022 Classification of Diseases Codes Clinical Modification and Procedural Classification System implements the International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM). Available at <https://icd10cmtool.cdc.gov/>. The "diagnosis code" for Radiation Sickness" is "T66." The "injury" code for "Exposure to Other Nonionizing Radiation" is "W90." These codes cover the symptoms associated with EMF-related health problems along with other RF exposure-related injuries and maladies.

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<sup>21</sup> IEQ Indoor Environmental Quality, A project of the National Institute of Building Sciences (NIBS) with funding support from The Architectural and Transportation Barriers Compliance Board (Access Board), 2005

<sup>22</sup> Belyaev, I., Dean, A., Eger, H., Hubmann, G., Jandrisovits, R., Kern, M., EUROPAEM EMF Working Group. (2016). EUROPAEM EMF guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses. *Reviews on Environmental Health*, 31(3), 363–397. <https://doi.org/10.1515/reveh-2016-0011>

## CONCLUSION

For the above reasons and with the above history in mind of the failures of extinguishing the truth when RF regulatory limits were established in 1996 and more recently, the failure of the FCC to respond to a mandate from the second highest court in the land, Rocky Mountains for Safe Technology along with other NGOs, scientists, physicians and members of multiple communities not only in the West but across the country, strongly oppose FCC Docket 25-276 and related dockets advancing the purpose of eliminating ostensible "barriers" which are indeed among the few remaining protections afforded this country.

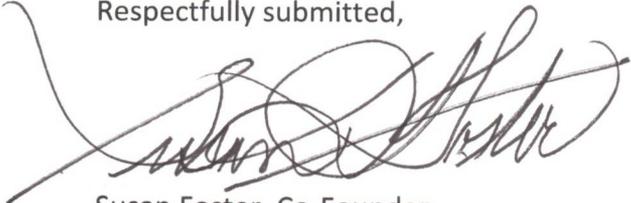
The Telecommunications Act of 1996 guarantees local control in specific areas unrelated to health; Docket 25-276 proposes to eliminate local control as the FCC moves forward with these new rules to fast-track cell towers and wireless infrastructure, the consequences will be profound and far-reaching, causing serious harm to the American people and the environment.

We respectfully request the FCC reject the proposals in 25-276.

*"A wise and frugal Government, which shall restrain men from injuring one another, shall leave them otherwise free to regulate their own pursuits of industry and improvement."*

*Thomas Jefferson, First Inaugural Address, March 4, 1801*

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Susan Foster', written over a large, stylized flourish that extends across the line.

Susan Foster, Co-Founder  
Rocky Mountains for Safe Technology  
Lyons, Colorado

Attachments