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Declaration in Support of the Petition for Rulemaking to the Secretary of the U.S. Department of Health and Human Services (HHS) by Americans for Responsible Technology (ART) et al. under the Imminent Hazard Rules Requesting an Immediate Clarification of FDA Official Policy on RFR/EMF Safety.

November 16, 2021

My name is Camilla R. G. Rees and I reside at 32 Water Street, Stonington, CT 06378.

I have been significantly injured in four different settings from exposures to wireless radiation (RFR), twice in residential settings and twice in office environments, and mildly impacted in several other situations. It is because of these experiences that I have come to be a researcher, educator and consultant on the biological and health risks of wireless technologies, and an advocate for safer, technologically superior, hard-wired Internet access via fiber or cable. These experiences are also the reason why today I live in a low-density, non-urban, non-commercial environment to avoid the acute, chronic and cumulative effects of 24/7 Radio Frequency Radiation (RFR).

I conduct my work through the National Institute for Science, Law and Public Policy (NISLAPP) in Washington, D.C., where as a Senior Policy Advisor I have led its EMF Education and Advocacy Project for over a decade. In collaboration with many other pioneers in this field of education and advocacy, I have sought to raise awareness of the risks and alternatives to wireless technology. At NISLAPP, we have initiated, directed and overseen policy papers on electromagnetic fields, the smart grid and telecommunications, including the landmark papers, "[*Getting Smarter About the Smart Grid*](#)" and "[*Re-Inventing Wires: The Future of Landlines and Networks*](#)". "[*Re-Inventing Wires*](#)" explains, from technological and other perspectives, why hard-wired, fiber optics to the premises (FTTP) is superior to wireless Internet access networks and "antenna densification", and is clearly the safer alternative to 5G.

NISLAPP has organized dozens of programs on this subject around the country, including pioneering early programs on wireless risks to children, fiber alternatives to wireless, on the benefits of hard-wired utility meters over wireless, and on tech overuse and addiction, as well as presenting five programs featuring international experts on RFR risk at the largest public affairs forum in the U.S., the Commonwealth Club of California. Also, I authored "[*The Wireless Elephant in the Room*](#)" and co-authored, with Dr. Magda Havas of Trent University, Canada, "[*Public Health SOS: The Shadow Side of the Wireless Revolution*](#)".

For thirteen years, I have conducted in-depth interviews with leading international scientists on the biological and health risks of electromagnetic fields; was co-author of a [published paper](#) on wireless radiation's impact on the heart; and have created websites for the public, [ElectromagneticHealth.org](#) and [Manhattan Neighbors for Safer Telecommunications](#), as well as a Facebook group aimed at parents, teachers and school administrators, focused on RFR risks to children, [Campaign for Radiation Free Schools](#). We have also produced hundreds of videos featuring EMF experts, now circulating in 163 countries, including the [International EMF Scientist Appeal to the United Nations](#) (2015). I have been a long-time source for the media, and a source of support for new activist groups, physicians, major online

consumer health newsletters, government officials, schools, employers, lawyers, and for scientists themselves, since 2008. I also serve on the Advisory Board of the [Building Biology Institute](#), a leading educator of architects, builders and environmental consultants on environmental risks.

At the core of all of my work has been explaining: **1)** the inadequacy of the FCC's RFR thermal-only exposure guidelines to protect public health; **2)** that there has been no pre-market safety testing, or post-market surveillance, of health effects of wireless technologies and infrastructure; and **3)** that our government, including the FCC and FDA, has turned a blind eye to well-established RFR risks, and enabled harmful, RFR-emitting technologies to become pervasive throughout our lives, fueling growth of a trillion dollar, and now extremely powerful, industry that is making people sick.

In 2018, I was awarded the American Academy of Environmental Medicine's most prestigious award for outstanding contribution to Environmental Medicine, the [Jonathan Forman Award](#), and the "2018 Public Health Award" from the Global Foundation for Integrative Medicines.



Most recently, in collaboration with the New York 501(c)(3), Wired Broadband, Inc., and other groups, NISLAPP and Manhattan Neighbors for Safer Telecommunications are [opposing the 'Jumbo 5G Antennas'](#) being proposed for several neighborhoods in New York City. Massive radiating antennas (see photo at left) are being proposed for residential city streets, concentrated initially in 10 disadvantaged neighborhoods, and are being justified by the misleading claim that these antennas will close the 'digital divide' (which they will not).

Publicly available material on the proposed 'Jumbo' 5G antennas indicate there will be no more than one Jumbo 5G Antenna per block in these neighborhoods, but the materials also say any limitation (such as this) may be reversed by the New York City Commissioner in her sole discretion. No detail has to date been provided about the power, frequencies, and other technical specifications of the 'Jumbo' antennas, except drawings showing that each pole will contain not one, but many radiating antennas on multiple tiers (see drawing on the right). Each antenna within the structure would, alone, pose a serious health risk to those nearby. There is no provision we know of for monitoring the RF emissions of these Jumbo 5G Antenna arrays, or for determining whether the aggregate exposures of the initial 4,000 antenna arrays planned for these disadvantaged neighborhoods would be in compliance with FCC guidelines. The proposed antennas present enormous health and environmental risks to New York City residents. It is frankly egregious that they are being clustered in disadvantaged areas, leading to the possibility these communities are being used as guinea pigs to test for the likely harms these new giant-sized antennas will cause to nearby residents.



As we often find, it appears City officials have been misled into believing FCC exposure guidelines are protective, and have also been told that the FCC exposure guidelines have the support of the FDA, despite the fact that the FDA does not formally evaluate RF-emitting telecom devices and infrastructure, like they do with medical devices. Repeatedly, government officials across the country, as well as employers, schools, churches and property owners, are believing these false claims, and thus ignorantly jeopardizing people's health from small and macro towers on their premises, when safer Internet access options exist and could have been chosen over the wireless options.

Local officials are being told new 5G antennas are 'faster' than older wireless antennas, but not told about the safer, higher performance, and far superior, hard-wired technology option, Fiber to the Premises (FTTP). Fiber to the premises will always be faster than any generation of wireless, as wireless communications is a shared medium used by many on-line users at once. This critical fact is not mentioned by champions of wireless in the interest of selling communities on an inferior technology that will rapidly become obsolete. Wireless is not enduring technology, like fiber, which is paid for once and that former FCC Chairman, Tom Wheeler calls ['future-proof'](#).

Local officials have likely also not been told about the full range of advantages fiber offers over wireless, beyond speed, each one of which is a compelling reason on its own to choose fiber over wireless. See chart below about the advantages of fiber over wireless.

'Fiber To The Premises' - Advantages Over Wireless

- faster transmission speed
- reliability of Internet access
- neighborhood aesthetics
- national cybersecurity
- preserves human health from ambient radiation
- neutrality of internet access
- digital equity
- personal privacy
- protects the biological ecosystem
- safety & fire prevention
- resiliency in extreme weather events
- reduces climate impacts from this sector
- supports equality in high-speed internet access
- lowers energy usage and improves energy efficiency
- supports health in patients with chronic illnesses
- preserves hard-earned equity in peoples' homes
- quality of voice communications
- supports physical and cognitive health in the elderly
- supports children's health
- makes enduring tech choices not prone to rapid and costly obsolescence
- preserves the sanctity of neighborhoods with revered churches, temples, mosques, and landmark and historic buildings
- protects parks as a place of biological peace and refuge
- value for the money for all users

Without sharing the truth about the full range of Internet access options, the deception about both the adequacy of wireless to meet growing needs, and the inadequacy of regulatory oversight, American communities, businesses and individuals have been duped into believing an inferior technology is superior, and that wireless radiation does not present health risks, when nothing could be further than the truth.

Worth mentioning is the history of the [LinkNYC](#) free wireless access program in New York City, now expanding into the Link5G program with the 'Jumbo' antennas in the photo above. Originally, the LinkNYC business model was expected to rely solely on advertising. That business model failed, as evidently there were insufficient advertisers wanting to advertise on the RFR-radiating kiosks being placed around the City. By 2019, LinkNYC faced bankruptcy. Then in 2021, the City introduced a "mixed financial model" comprised of "advertising and 5G cellular services revenue" so that the expansion of the LinkNYC wireless network throughout the city could become viable. Since LinkNYC's mission is to offer free wireless access, it appears the wireless companies are underwriting part of the cost of the NYC wireless network, a compromised position for the City. The City is essentially in a long-term partnership with the telecom industry enabling widespread, harmful RFR radiation to blanket peoples' lives, all while the adequacy of the FCC safety guidelines have long been called into question.

It is telling to look back to an early U.S. government funded meta-study on RFR effects published by the U.S. Naval Medical Research Institute in 1971, by Zorach Glaser, PhD, "[Reported Biological Phenomena \(Effects\) and Clinical Manifestations Attributed to Microwave and Radio-Frequency Radiation](#)". In this review of global scientific studies on the effects of RFR--a half a century

ago--Dr. Glaser found 2,308 studies that linked RFR and other forms of EMF with 132 different biological effects, symptoms and diseases, including:

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| <ul style="list-style-type: none">• Central Nervous System Effects• Autonomic Nervous System Effects• Genetic and Chromosomal Changes• Psychological Disorders• Vascular Disorders | <ul style="list-style-type: none">• Blood Disorders• Enzyme and other Biochemical Changes• Metabolic Disorders• Endocrine Gland Changes• Changes in Physiological Function |
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Thirty six years later, a 1,540-page meta-study, published in 2007, updated in 2012, co-authored by a group of 29 international scientists, the [BioInitiative Report](#), cited more than 1,800 scientific studies that associate low-intensity, non-thermal radiation exposures from wireless technologies and other sources of electromagnetic radiation (EMR) with dozens of diseases and biological effects in humans, including:

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| <ul style="list-style-type: none">• Neurological Effects• Oxidative Damage• Effects on Immune Function | <ul style="list-style-type: none">• Stress Response• Brain Cancer• Acoustic Neuromas & Other Brain Tumors• Blood Brain Barrier Damage | <ul style="list-style-type: none">• Breast Cancer Promotion• Biochemical Imbalances• Fertility & Reproductive Effects | <ul style="list-style-type: none">• Childhood Cancers (leukemia)• Genotoxic Effects• Fetal & Neonatal Effects |
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These are just two examples of meta reviews of the scientific literature, but there are many additional meta reviews, as well as decades of published studies showing risks from RFR. These include rigorous studies documenting RFR effects conducted by the U.S. Government.

A recent monograph, "[THE LARGEST UNETHICAL MEDICAL EXPERIMENT IN HUMAN HISTORY](#)" (2020) by Ronald N. Kostoff, Research Affiliate, School of Public Policy, Georgia Institute of Technology, identifies a wide spectrum of adverse effects of wireless radiation as reported in the premier biomedical literature over seven decades.

In the case of the Jumbo 5G antennas being proposed for New York City, it is unacceptable that the truth about the technological choices, and their advantages and risks, is not being transparently presented to City officials. Very dangerous wireless densification is being carried out and further planned under the banner of 'closing the digital divide' by officials who have made poor decisions. Poor decisions have been made as a result of having been misled about the adequacy of the FCC RFR exposure guidelines--misled by the FCC, the FDA, and the telecommunications industry itself wanting to sell its products and services.

Over time, many individuals and groups have attempted to encourage government officials to focus on wireless radiation risks, but a blind eye has been turned to the topic by politicians, many of whom accept contributions from the telecom industry. Meanwhile, since 1990, millions of U.S. citizens having been harmed by this radiation, and are increasingly being harmed, with more and more radiating

devices and infrastructure continually going up all around. Overall health in the U.S. has substantially declined since 1990 and there has been a dramatic, yet underrecognized, rise in chronic disease. Acute symptoms from wireless exposures, like sleep issues, mood swings, irritability, joint pain, brain fog, memory issues and poor learning capacity are plaguing our nation. The fastest-growing diseases have been associated with biological changes known to be caused by wireless radiation. And, importantly, DNA damage occurring remains a wild card over the long-term for our species as well as for the ecosystem.

Our government appears to have been 'captured' by the telecom industry, believing its false claims about safety without looking to the scientific literature itself, or to the tremendous amount of evidence for risk from RFR well documented in U.S. government studies. Many departments and agencies of the federal government have documented RFR risks going back decades, including the U.S. Naval Medical Research Institute, EPA, U.S. Air Force, U.S. Department of the Army, NIH, NASA, Department of Interior and the Defense Intelligence Agency (See ["Wireless Radiation - Is the U.S. Government Ignoring its Own Evidence for Risk?"](#)).

The crux of the issue causing so much suffering and driving health costs is that FCC exposure guidelines for RFR are wholly inadequate, do not reflect the science, and are being used across the country, with FDA complicity, to mislead about the antennas' safety.

The RFR exposure guidelines aim only to protect against thermal effects of the radiation. They do not address the well-established 'non-thermal' effects, including biologically disruptive frequencies, the peaks and pulsing, and increasingly complex signaling characteristics.

Importantly, the FCC guidelines have misled manufacturers of wireless devices and equipment, infrastructure installers, service providers, retailers, real estate owners, building managers and the public into believing RFR radiation is safe if in compliance with the FCC's thermal guidelines. Businesses and property owners have been able to take cover from liability in relying on these government sanctioned FCC guidelines. The public naively believes antennas outside their windows (as in the case of the photo below from New York City) must be safe if they have been permitted or otherwise approved. I certainly made that assumption--and most others, unfortunately, do, too.



Citizens have placed faith in the permitting process and government oversight, only to learn proper procedures have not been followed to protect public health. Even people suffering terrible illnesses who are aware there are antennas outside their window, often do not think to connect the antennas with their health challenges, because they make the false assumption that our government would not have permitted the antennas were there actually science showing RFR radiation is not safe.

This situation has been going on far too long and must stop. The truth about the FCC's inadequate exposure guidelines, and the FDA's hollow endorsement of the guidelines, must be known.

Here is one example of how people are being misled by the FCC's exposure guidelines and by the FDA's agreement on those guidelines. In a Manhattan co-op, where antennas were proposed to be placed on a water tower on the building's roof, I advised the Co-Op's Board of Directors not to allow the

antennas. I read, and formally rebutted, Pinnacle Telecom Group's report to the Board of Directors and attended the Board meeting, along with representatives of Pinnacle and Verizon. I heard Pinnacle's misleading presentation that the FCC and FDA had certified there was no RFR risk from the antennas. Pinnacle's [report to the Board of Directors](#) stated the following:

"Note that both the FCC and the Food and Drug Administration (FDA) have certified that continuous human exposure at RF levels up to and including the FCC MPE [Maximum Permitted] limit is considered to present no RF health risk. Moreover, the FCC MPE limit has been designed to provide appropriate protection for humans of either sex, all ages, all sizes, and under all conditions."

This is false. Were it not for my quickly commandeering the meeting, telling the Board Members that what they were hearing was false, and then delivering a scientific presentation on the matter, the proposed antennas would have been approved, and then impacted the health of people on the higher floors of this building, as well as those living in many neighboring buildings.

The media also regularly misleads about RFR risk. Reference to the FDA deeming the radiation 'harmless' is found in the recent *Wall Street Journal* article, dated November 13, 2021, "[Are AirPods Out? Why Cool Kids Are Wearing Wired Headphones](#)". The message that the FDA currently deems the radiation "to be harmless to humans" presumably reached the *Wall Street Journal*'s 3.4 million circulation.

"...Biz Sherbert, a cultural specialist at youth culture-focused creative agency the Digital Fairy, narrated a TikTok video on corded headphones. "It seems that people are very concerned about the potential Bluetooth radiation that comes from AirPods," she concluded based on the video's comments. (While Bluetooth headphones do emit non-ionizing radiation, the Food and Drug Administration currently [deems](#) it to be harmless to humans.)"

It is time for the FCC and FDA to come into integrity and make clear the limited nature of their investigation into RFR risks, acknowledging that they, too, have become captured by the telecom industry. (See Harvard University's Edmond J. Safra report, "[How the Federal Communications Commission is Dominated by the Industries it Presumably Regulates](#)"). We must stop suppressing the truth about risks of RFR radiation.

If the FCC says it relies on the safety expertise of the FDA, and states it considered opinions of the FDA in setting its safety guidelines, but the FDA officially does not review the safety of radiation emitting telecommunications technologies, as it does with new drugs or medical devices, then where is the responsibility for assuring safety actually domiciled? Has responsibility for ascertaining safety potentially fallen through the cracks between these two agencies, resulting in a situation where proper protection of human, animal and environmental health interests is not taking place? And on what basis does the FCC, a communications commission charged with regulating interstate and international communications, and not a health agency, have authority to ascertain safety and establish RFR safety guidelines in the first place?

It is essential that clarity be obtained regarding FCC and FDA responsibility for:

- 1) Setting protective, biologically-based exposure guidelines for RFR;
- 2) Clarifying the pros and cons of different telecommunications technologies (fiber, wireless, cable, advanced copper, etc.) so that the public, government officials and businesses can make fully informed choices;
- 3) Conducting pre-market safety testing of wireless devices and wireless infrastructure prior to release onto the market;
- 4) Conducting post-market monitoring of RFR exposures from each antenna, and the aggregate antennas in a neighborhood, to assure compliance with FCC guidelines;
- 5) Conducting short- and long-term post-market health monitoring of individuals living in dense wireless environments;
- 6) Conducting short- and long-term post-market health monitoring of natural environments exposed to RFR;
- 7) Educating the public about health risks associated with RFR exposures and how they might be able to be reduced.

The American people must be assured that regulators' top priority is public health and safety.

Additional steps that can restore trust that has been lost due to lack of clarity on responsibility between the FCC and FDA and failure of government to protect public health can be found in "[33 Recommendations for the FCC, FDA and Congress](#)".

Respectfully submitted in support of the Petition for Rulemaking to the Secretary of the U.S. Department of Health and Human Services by Americans for Responsible Technology et al.

A handwritten signature in black ink that reads "Camilla R. G. Rees". The signature is written in a cursive style and is followed by a horizontal line that extends to the right.

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