

**Before the  
Architectural and Transportation Barriers Compliance Board  
Washington, D.C.**

In the Matter of: NPRM to revise accessibility	)	
guidelines for buildings and facilities covered	)	Docket No. ATBCB-2024-0001
under the Americans with Disabilities Act and the	)	RIN 3014-AA48
Architectural Barriers Act to address accessibility	)	36 CFR Part 1191
of EV charging stations	)	

**COMMENTS OF ADVOCATES FOR THE EMS DISABLED  
NOVEMBER 4, 2024**

**FILING PARTIES**

The parties listed below collectively constitute the “Advocates for the EMS Disabled,” have given their permission to be included here and join together to submit these Comments:

The National Call for Safe Technology, Odette Wilkens, Chair & General Counsel; Wired Broadband, Inc. (non-profit), Odette Wilkens, President & General Counsel, Forest Hills, NY; Jen Goddard, Board Certified Doctor of Natural Health, Thriving Proof Holistic Health Practice, and 2025 United States of America Mrs. Maine Pageant, Brewer, ME; Sheila Resseger, M.A., Co-Founder, Cranston, RI; Susan Molloy, M.A., Snowflake, AZ; Coloradoans for Safe Technology, Andrea Mercier (**Mother of a severely disabled child who is adversely impacted various forms of non-ionizing radiation**), Colorado Springs, CO; Coloradans for Safe Technology, Nancy VanDover, DVM, OMD, Dipl Acup, **EMS Disabled**; Deborah Shisler, **EMS Disabled**, CO; La Plata for Safe Technology, Ingrid Iverson, EMS Disabled, CO; Virginians for Safe Technology, Jenny DeMarco and Mary Bauer, Fredericksburg, VA; NY4Whales & NY4Wildlife Taffee Williams, President, Tuckahoe, NY; Safe Tech International, Sara Aminoff, Union City, CA; Safe Tech International, Kate Kheel, Taneytown, MD; Safe Tech International, Patricia Burke, Millis, MA; Safe Tech Westchester, Ruth F. Moss, Westchester, NY; Sharon Behn, Arden, NC; Soft Lights Foundation, Mark Baker, President, Beaverton, OR; Rosemarie Russell, EMS Disabled, Hurricane, UT; Soula Culver, member of Wireless Radiation Alert Network (WRAN) and Wireless Radiation Education and Defense (WIRED), Berkeley, CA, **EMS Disabled**; Fiber First Los Angeles, Charlene Hopey, Topanga, CA; Gene Wagenbreth, Topanga, CA; Jan Kiefer, Scottdale, PA; Katherine Katzin, Takoma Park, MD; Longmont for Safe Technology, Doe Kelly, Co-Founder, **Electromagnetically Sensitive Individual**, Longmont, CO; Safe Technology MN, Leo Cashman, St. Paul, MN; EMF Wellness Tucson, Lisa Smith, PhD, EMRS, Electromagnetic Radiation Specialist, Tucson, AZ; Safe Tech Tucson, Tucson, AZ; Lisa Allen, Plainfield, NJ; SW Ohio for Responsible Technology (SWORT), Monique Maisenthaler, SWORT Board Member; Safe

Tech Hawaii, Debra Greene, PhD, Maui, Hawaii; Floris Freshman, **EMS Disabled**, Scottsdale, AZ; The Leto Institute, Heidi Davis, President, Westboro, MA; and Ghislaine Sosa, **EMS Disabled**, New York, NY.

## Introduction

We applaud the Architectural and Transportation Barriers Compliance Board (Access Board) on proposing rules that would make EV charging stations accessible to people with disabilities.<sup>1</sup> Those disabled by wireless radiation are also people who may need access to EV charging stations, with additional requirements for access, and precautions regarding proximity to such stations when not accessing them.

The Notice of Proposed Rulemaking (NPRM) seeks to provide “specifications for the accessibility of EV charging stations, to include the EV charger (including physical and communication access), EV charging space, access aisles, and accessible routes.”<sup>2</sup> The stated purpose is “to set minimum guidelines to ensure that EV charging stations are readily accessible to and usable by people with disabilities.”<sup>3</sup> This would apply for new construction and future alterations of EV charging stations.

Wireless radiation – also known as radio frequency electromagnetic (RFE) radiation – is an underappreciated, and often unknown, threat to the public. As ADA accommodation is the purpose of this NPRM, providing access to EV charging stations without exposing people disabled from life-threatening RFE radiation would fit within that purpose.

Therefore, wired connections at EV charging stations would be needed for those people disabled by RFE radiation. Although the EV charging stations appear to be configured mostly for wired connections, it should be noted that any wireless connectivity should be on an opt-in basis. The charging stations should also be located a sufficient distance away from those disabled by RFE radiation so as not to create a life-threatening zone for them. This and other more technical recommendations are covered by these comments.

We cover the following in these comments:

1. Electromagnetic Sensitivity (EMS) Recognized by the Access Board
2. Who are the EMS Disabled?
3. The Need for Digital Inclusion
4. Adverse Biological Effects from RFE Radiation
5. Industry Knows of RFE Radiation Biological Hazards
6. Proposed Recommendations for EV Charging Stations for the EMS Disabled

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<sup>1</sup> <https://www.federalregister.gov/documents/2024/09/03/2024-18820/americans-with-disabilities-act-and-architectural-barriers-act-accessibility-guidelines-ev-charging>, Summary.

<sup>2</sup> <https://www.federalregister.gov/documents/2024/09/03/2024-18820/americans-with-disabilities-act-and-architectural-barriers-act-accessibility-guidelines-ev-charging>, Summary.

<sup>3</sup> Ibid, Sec 1.

The following Addenda are also included, attached hereto and incorporated herein by this reference.

Addendum A: Biological Effects of RFE Radiation

Addendum B: The Range of RFE Radiation

Addendum C: EMS Disabled: In Their Own Words

## 1. Electromagnetic Sensitivity (EMS) Recognized by the Access Board and other Federal Agencies

Those disabled by RFE radiation need accommodation under the Americans with Disabilities Act (ADA). The Access Board has recognized electromagnetic sensitivity since 2002, and memorialized this in its 2004 determination.<sup>4</sup>

The Board recognizes . . . electromagnetic sensitivities may be considered disabilities under the ADA if they so severely impair the neurological, respiratory or other functions of an individual that it substantially limits one or more of the individual's major life activities. The Board plans to closely examine the needs of this population, and undertake activities that address accessibility issues for these individuals.

The Board plans to develop technical assistance materials on best practices for accommodating individuals with . . . electromagnetic sensitivities.<sup>5</sup>

In addition to the Access Board, the **National Council on Disabilities (NCD)** in 2022 issued a Framework for health equity, recognized EMS and recommended mandatory industry guidance and training to address the needs of those disabled by "electromagnetic and other environmental exposures," "wireless communications and electrical technologies and other sources of non-ionizing radiation, which may trigger disabling and life-threatening cardiac, respiratory, neurological, and other adverse physical reactions. (Requires administrative action through HHS Office of Civil Rights, and further research concerning this matter should be conducted by the FDA, NIH, HHS, and HUD.)"<sup>6</sup> A presentation on EMS disability was made to NCD on May 12, 2022 which includes information on the need to provide access and accommodation for the EMS Disabled.<sup>7</sup>

Other federal agencies and groups have recognized EMS disabilities:

- **Housing and Urban Development (HUD)** has recognized electromagnetic sensitivities in its most recent rulemaking this year.<sup>8</sup>

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<sup>4</sup> U.S. Access Board, [Advancing Full Access & Inclusion for All](https://www.access-board.gov/research/building/indoor-environmental-quality/), "Indoor Environmental Quality Project," <https://www.access-board.gov/research/building/indoor-environmental-quality/>; see also, Federal Register, July 24, 2004, Vol 69, No. 141, Part II, Architectural and Transportation Barriers Compliance Board; Final Rule, at 44087.

<sup>5</sup> Ibid.

<sup>6</sup> [https://www.ncd.gov/assets/uploads/reports/2022/ncd\\_health\\_equity\\_framework.pdf](https://www.ncd.gov/assets/uploads/reports/2022/ncd_health_equity_framework.pdf) at Page 10, Sub-Component 6.

<sup>7</sup> <https://www.electrosensitivesociety.com/national-council-on-disability-ncd-ehs-mcs-presentation-may-12-2022/> (includes transcripts, slide deck and historical timeline of MWEMF/RF exposure).

<sup>8</sup> <https://www.govinfo.gov/content/pkg/FR-2024-05-09/pdf/2024-09237.pdf> at 40068.

- The **Social Security Administration** in 2003 made a determination of severe impairment regarding EMS disabilities.<sup>9</sup>
- The **Department of Defense** in 2021 set forth guidelines that recognize injuries that may occur to its personnel from RFE radiation.<sup>10</sup>
- The **Job Accommodations Network (JAN)** funded by the U.S. Department of Labor’s Office of Disability Employment Policy (DOL/DEP) has issued a list of guidelines that recognize EMS and requires accommodation (see listing for “Electrical Sensitivity & Hypersensitivity,” and “Electromagnetic Fields and Public Health”).<sup>11</sup>
- The **Center for Disease Control (CDC)**, in its International Classification of Diseases, recognizes a medical diagnosis for MW/EMF/RF injuries:<sup>12</sup>  
ICD-10-CM “diagnosis code” for radiation sickness is “T66.”  
ICD-10-CM “injury” code for “Exposure to radio frequency” and “Exposure to other non-ionizing radiation” is “W90.”

Therefore, we recommend that the proposed rules incorporate the recommendations in Section 6 below to provide access to EV charging stations for the EMS Disabled.

## 2. Who are the EMS Disabled?

Those suffering injuries from exposure to RFE radiation are known as having electromagnetic sensitivity (EMS), also referred to as radiation poisoning or microwave sickness.<sup>13</sup> Hence, those with ensuing disabilities are referred to as “EMS Disabled.” Their disabilities give rise to “impairment[s] that substantially limit[] one or more major life activities” under the ADA.<sup>14</sup>

What is emitted from wireless devices and facilities is commonly referred to as RFE radiation, electromagnetic fields (EMF), microwave radiation or wireless radiation. It is the **persistent pulsations** of RFE radiation that cause adverse health outcomes and ensuing disabilities.<sup>15</sup> Imagine if the lights in a room flickered on and off a thousand times a second, 24/7, it would be very annoying, and may even

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<sup>9</sup> <https://ehtrust.org/wp-content/uploads/Electromagnetic-Sensitivity-Found-to-be-a-Severe-Impairment-by-the-Social-Security-Administration-2003-and-2020-.pdf>.

<sup>10</sup> DoD Instruction 6055.11, “Protecting Personnel from Electromagnetic Fields,” <https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605511p.pdf>.

<sup>11</sup> <https://askjan.org/disabilities/Electrical-Sensitivity.cfm#otherinfo>.

<sup>12</sup> <https://icd10cmtool.cdc.gov/?fy=FY2023&query=radiation>.

<sup>13</sup> Electromagnetic Sensitivity, also known as “microwave sickness,” <https://ehtrust.org/science/electromagnetic-sensitivity/>.

<sup>14</sup> 42 U.S.C. §12102(1)(A).

<sup>15</sup> Dr. Magda Havas: WiFi in Schools is Safe. True or False? at 7:15, <https://www.youtube.com/watch?v=6v75sKAUFdc>; see also, Brief of Children’s Health Defense, and Building Biology Institute, et al as Amici Curiae in Support of Appellees/Cross-Appellants “Customers,” Sept 14, 2021, <https://childrenshealthdefense.org/wp-content/uploads/Brief-and-Addendum-Submitted-9-14.pdf>.

cause headaches, nausea and other adverse reactions. It is the pulsed high peak power emissions that, for example, increase the potential for traumatic brain injury and consequent cognitive impairments.<sup>16</sup>

EMS disabilities encompass a constellation of symptoms which can include: sleep disturbances, chronic fatigue, chronic pain, poor short-term memory, difficulty concentrating (e.g., “brain fog”), skin problems, dizziness, loss of appetite, heart palpitations, tremors, vision problems, tinnitus, nose bleeds, asthma, reproductive problems and headaches, to name a few.<sup>17</sup> There are other sources showing the proliferation of such disabilities.<sup>18</sup> The symptoms are from the physiological injuries that individuals have sustained from exposure to wireless devices and facilities.<sup>19</sup> Therefore, exposure to RFE radiation, such as when using mobile apps on mobile devices, without an alternative means of accessing a service, will just make matters worse for the EMS Disabled, worsening their condition and denying them equal access to services otherwise made available to other disabled individuals and to the general public.

Courts have recognized that ADA accommodation applies to the EMS Disabled. In California, the Court of Appeals in 2021 found that sensitivity to Wi-Fi is a disability under state law which requires accommodation.<sup>20</sup> Accommodation is also recognized for other RFE emitting devices, such as smart meters. For example, in Maine, a federal district court rejected an electrical power company’s motion to dismiss ADA and Fair Housing Act claims the plaintiff brought against the company charging an opt-out fee associated with providing accommodation for removing a smart meter.<sup>21</sup> This means that the court held, accepting as true the plaintiff’s allegations, the charging of fees for a smart meter opt-out could implicate ADA and Fair Housing Act compliance.

**Addendum C** provides accounts of a wide array of individuals injured and disabled by RFE radiation from many sources of electronics such as wireless tablets, Wi-Fi, wireless touchpads, smart meters and cell antennas.

### 3. The Need for Digital Inclusion

The EMS Disabled require equal access in a manner that does not injure them and that does not otherwise put them in harm’s way. They cannot use a technology that is harming them. Otherwise, compelling the EMS Disabled to use wireless technology gives rise to **digital exclusion**, a serious environmental justice issue.

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<sup>16</sup> Computational modeling investigation of pulsed high peak power microwaves and the potential for traumatic brain injury. *Sci Adv.* 2021 Oct; 7(44). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8555891/>.

<sup>17</sup> “Electrohypersensitivity as a Newly Identified and Characterized Neurologic Pathological Disorder” *Int’l Journal of Molecular Sciences*, <https://www.mdpi.com/1422-0067/21/6/1915>.

<sup>18</sup> Electrohypersensitivity (EHS) Is An Environmentally-Induced Disorder That Requires Immediate Attention, Dr. Magda Havas, *J. Sci Discov* (2019), <http://www.e-discoverypublication.com/wp-content/uploads/2019/03/JSD18020-final.pdf>; Presentation by Karl Maret, M.D., M.Eng., Presentation, 1-17-20, <https://www.youtube.com/watch?v=Xilsy3mcjcy>; “The Bioinitiative Report,” <https://bioinitiative.org/>.

<sup>19</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://midsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>20</sup> *Brown v. LAUSD* (2021), <https://cases.justia.com/california/court-of-appeal/2021-b294240.pdf?ts=1613676655>.

<sup>21</sup> *Maine Friedman v. Central Maine Power Company* (2021) [https://scholar.google.com/scholar\\_case?case=18138407959214488344&hl=en&as\\_sdt=200](https://scholar.google.com/scholar_case?case=18138407959214488344&hl=en&as_sdt=200).

The National Institute for Science, Law and Public Policy published a report of advantages of hardwired connections, which would be of tremendous benefit for making accommodation for the EMS Disabled.<sup>22</sup>

Federal policies have ignored millions of Americans disabled by wireless radiation.<sup>23</sup> The Access Board has the opportunity to include policies that include the EMS Disabled in the proposed rules. To aid in that process, the recommendations in Section 6 below underscore wired technology to access EV charging stations and other technical requirements.

#### 4. Adverse Biological Effects from RFE Radiation

It is estimated that at least 30% of any given population is afflicted from RFE radiation poisoning and close to 1% is severely disabled that they can no longer work or live in areas that have this radiation.<sup>24</sup> The EMS Disabled didn't see it coming. Exposure gives rise to a constellation of symptoms, in addition to those previously listed, some of which include: headaches, nausea, vomiting, tinnitus, hearing loss, heart arrhythmia, tachycardia, neurological disorders; oxidative stress; immune dysfunction; ADHD, and damage to the blood-brain barrier.

Evidence of biological harm from RFE radiation is **clear and convincing**, for human health (cancer and noncancer), children, plants, animals, insects, and microbes.<sup>25</sup> See **Addendum A** for a fuller explanation of the biological effects, especially on children that may lead to EMS disability in children. Also see **Addendum B** for the range of RFE radiation from an antenna.

Here are some highlights:

1. There has been no pre-market testing of 5G for public health or safety, as confirmed by US Sen. Blumenthal (CT) during a Feb. 2019 hearing of wireless telecom executives. The telecom executives conceded that they were not aware of any independent scientific studies on the safety of 5G. Sen. Blumenthal also criticized the FCC and the FDA for inadequate answers on

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<sup>22</sup> "Reinventing Wires: The Future of Landlines and Networks," at 73, National Institute for Science, Law and Public Policy, authored by Timothy Schoechle, PhD; <https://electromagnetichealth.org/wp-content/uploads/2018/02/ReInventing-Wires-1-25-18.pdf>.

<sup>23</sup> See Reply Comments of Advocates for the EMS Disabled, FCC Docket 22-69 <https://thenationalcall.org/wp-content/uploads/2023/09/FCC-Reply-Comments-EMS-Disabled-Docket-22-69-DEI-NPRM-4-20-23-FINAL.pdf>.

<sup>24</sup> The Prevalence of People with Restricted Access to Work in Manmade Electromagnetic Environments, <https://mdsafetech.files.wordpress.com/2019/10/2018-prevalence-of-electromagnetic-sensitivity.pdf>.

<sup>25</sup> See testimony submitted by Environmental Health Trust to Senate Commerce Committee, 3/27/24, regarding spectrum policy and harms from radiofrequency radiation

<https://ehtrust.org/wp-content/uploads/EHT-Testimony-to-Senate-Commerce-Committee-on-S3909-03272024.pdf>

National Toxicology Program 2018: clear evidence of cancer (highest level of evidence)

<https://ntp.niehs.nih.gov/whatwestudy/topics/cellphones#studies>

Woman living near cell tower diagnosed with 51 strokes,

[https://www.momsacrossamerica.com/woman\\_living\\_near\\_cell\\_tower](https://www.momsacrossamerica.com/woman_living_near_cell_tower)

Children and teachers diagnosed with cancer after cell tower installed near elementary school

[https://www.youtube.com/watch?v=-9TMTexPb\\_0&t=128s](https://www.youtube.com/watch?v=-9TMTexPb_0&t=128s)

questions of public health. Sen. Blumenthal concluded, “We’re kind of flying blind here as far as health and safety is concerned.”<sup>26</sup>

2. Eight studies since Jan 2023 show adverse health impacts from exposure to 5G towers. Previously healthy individuals developed typical “microwave syndrome” symptoms shortly after the towers were installed: headaches, abnormal fatigue, heart arrhythmia, burning skin, trouble concentrating.<sup>27</sup> The significance of these reports is that non-ionizing radiation<sup>28</sup> from 5G — well below levels allowed by authorities — can cause health problems in individuals who had no prior history of electromagnetic sensitivity.<sup>29</sup> Dr. Lennart Hardell, lead author of the reports and a world-renowned scientist on cancer risks from radiation, affirms these reports as “groundbreaking” because they serve as the “first warning of a health hazard.”<sup>30</sup>
3. The WHO’S International Agency for Research on Cancer (IARC) classified wireless radiation (2G and 3G) as a **possible human carcinogen** back in 2011,<sup>31</sup> similar to lead, diesel fuel and gasoline engine exhaust.
  - a. The WHO carefully states on its website that “only a few studies have been carried out at the frequencies to be used by 5G”<sup>32</sup> thereby skirting the issue of 5G safety. Indeed, a number of studies since Jan 2023 have already shown harm.<sup>33</sup>
  - b. When the WHO states on its website lack of causality of harm from wireless radiation,<sup>34</sup> it is based on its 2011 IARC classification that wireless radiation (2G and 3G) is a **Class 2B**

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<sup>26</sup> <https://ehtrust.org/health-effects-of-5g-wireless-technology-confirmed-at-us-senate-hearing-after-senator-blumenthal-questions-industry/>; see also, <https://mdsafetech.org/2019/02/13/no-research-on-5g-safety-senator-blumenthal-question-answered/>.

<sup>27</sup> <https://mdsafetech.org/2023/11/20/5g-health-effects-5-case-reports-of-health-symptoms-after-5g-cell-towers-placed-in-sweden/>; e.g., Jan 2023 study of 63 year old man and 62 year old woman where 5G antennas were installed on the rooftop of their home, [https://www.gavinpublishers.com/assets/articles\\_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf](https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf) and <https://childrenshealthdefense.org/defender/5g-radiation-microwave-syndrome-symptoms/>; Feb 2023 study of two previously healthy men where 5G antennas were installed on the rooftop of their business, <https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf>; April 2023 study of 52 year old woman whose apartment was 60 meters from a 5G base station, <https://acmcasereport.com/pdf/ACMCR-v10-1926.pdf?fbclid=IwAR2J-mE3XeBxqaXPQdFxsIf9Q23bMCer9vgUBHnCvJXBrgBv-w7YdRUDwF0>; see also, The microwave syndrome or electro-hypersensitivity: historical background <https://pubmed.ncbi.nlm.nih.gov/26556835/>.

<sup>28</sup> <https://childrenshealthdefense.org/emr/emf-key-terms-descriptions/>.

<sup>29</sup> <https://childrenshealthdefense.org/emr/emf-wireless-health-impacts/>.

<sup>30</sup> <https://www.stralskyddsstiftelsen.se/two-studies-show-that-5g-caused-the-microwave-syndrome-in-healthy-persons/>.

<sup>31</sup> [https://www.iarc.who.int/wp-content/uploads/2018/07/pr208\\_E.pdf](https://www.iarc.who.int/wp-content/uploads/2018/07/pr208_E.pdf).

<sup>32</sup> <https://www.who.int/news-room/questions-and-answers/item/radiation-5g-mobile-networks-and-health>.

<sup>33</sup> <https://mdsafetech.org/2023/11/20/5g-health-effects-5-case-reports-of-health-symptoms-after-5g-cell-towers-placed-in-sweden/>; Jan 2023 study of 63 year old man and 62 year old woman where 5G antennas were installed on the rooftop of their home, [https://www.gavinpublishers.com/assets/articles\\_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf](https://www.gavinpublishers.com/assets/articles_pdf/Case-Report-The-Microwave-Syndrome-after--Installation-of-5G-Emphasizes-the-Need-for--Protection-from-Radiofrequency-Radiation.pdf) and <https://childrenshealthdefense.org/defender/5g-radiation-microwave-syndrome-symptoms/>; Feb 2023 study of two previously healthy men where 5G antennas were installed on the rooftop of their business, <https://www.anncaserep.com/open-access/development-of-the-microwave-syndrome-in-two-men-shortly-after-9589.pdf>; April 2023 study of 52 year old woman whose apartment was 60 meters from a 5G base station, <https://acmcasereport.com/pdf/ACMCR-v10-1926.pdf?fbclid=IwAR2J-mE3XeBxqaXPQdFxsIf9Q23bMCer9vgUBHnCvJXBrgBv-w7YdRUDwF0>; see also, The microwave syndrome or electro-hypersensitivity: historical background <https://pubmed.ncbi.nlm.nih.gov/26556835/>.

<sup>34</sup> <https://www.who.int/news-room/questions-and-answers/item/radiation-5g-mobile-networks-and-health>.



**possible carcinogen.** However, over a decade later, Dr. Miller, a former Senior Epidemiologist and Senior Scientist at the IARC has stated, “[t]here is sufficient evidence to now classify radiofrequency radiation as a human carcinogen.”<sup>35</sup>

4. The National Toxicology Program of the U.S. Dept of Health and Human Services, commissioned by the Food and Drug Administration to conduct a \$30 million study, in 2018 found clear evidence of cancer: heart tumors were malignant schwannomas and brain tumors were malignant gliomas.<sup>36</sup> NTP is one of the most prestigious institutions in the world in toxicology. Indeed, in 1999 the FDA nominated to the NTP the study of RFR “with a high priority,” to conduct animal studies, stating that it was “not scientifically possible to guarantee that non-thermal levels of microwave radiation . . . will not cause long-term adverse health effects.”<sup>37</sup> Dr. Linda Birnbaum of the NIEHS – the NTP study concludes clear evidence of an association with cancer.<sup>38</sup>
5. As early as 2015, over 230 scientists from over 40 countries have signed “The 5G Appeal” to halt the proliferation of 5G -- The International Scientists’ Appeal to the United Nations to Protect Humans and Wildlife from the unconstrained proliferation of wireless radiation.<sup>39</sup> Other scientists have joined in consensus statements about their 5G concerns.<sup>40</sup>
6. Thousands of scientific and medical studies show neurological disorders; increased risk of cancer and brain tumors; DNA damage; oxidative stress; immune dysfunction; cognitive processing effects; altered brain development, sleep and memory disturbances, ADHD, abnormal behavior, sperm dysfunction, and damage to the blood-brain barrier.<sup>41</sup>

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<sup>35</sup> Professor Miller, MD, FRCP, FRCP (C), FFPH, FACE, is an eminent physician and expert in preventative medicine, a scientific advisor to various scientific and health authorities, and a former Senior Epidemiologist and Senior Scientist at the World Health Organization’s (WHO) International Agency for Research on Cancer (IARC), <https://phiremedical.org/2020-nir-consensus-statement-press-release/>; see Prof. Miller’s statement at 00:15:06 at <https://www.youtube.com/watch?v=S16Q16-w9I8>; see also Proceedings from a Symposium on the Impacts of Wireless Technology on Health, Prof. Miller at 8, [https://www.womenscollegehospital.ca/wp-content/uploads/2022/06/Symposium\\_Document\\_Final\\_Jan\\_12.pdf](https://www.womenscollegehospital.ca/wp-content/uploads/2022/06/Symposium_Document_Final_Jan_12.pdf).

<sup>36</sup> <https://ntp.niehs.nih.gov/whatwestudy/topics/cellphones#studies> *Environmental Health Trust, et al v. FCC*, Motion for Leave to File Brief of Amicus Curiae Joseph Sandri in Support of Petitioners Urging Reversal, Aug. 5, 2020, <https://ehtrust.org/wp-content/uploads/20-1025-Amicus-Brief-Joe-Sandri.pdf>.

<sup>37</sup> Letter from the Dept of Health and Human Services to the National Toxicology Program at the National Institute for Environmental Health Studies, May 19, 1999, [https://ntp.niehs.nih.gov/sites/default/files/ntp/htdocs/chem\\_background/exsumpdf/wireless051999\\_508.pdf](https://ntp.niehs.nih.gov/sites/default/files/ntp/htdocs/chem_background/exsumpdf/wireless051999_508.pdf).

<sup>38</sup> See Dr. Birnbaum letter and hyperlinked amicus brief <https://www.dropbox.com/scl/fi/nc7l00p8zxk8tj0l2a1yr/Dr.-Linda-Birnbaum-cell-tower-letter.pdf?rlkey=vq1i363i74umg9ybydrhmn5d&st=q9l49h88&dl=0> ; see also, <https://ehtrust.org/former-niehs-director-dr-linda-birnbaum-interviewed-about-cell-phone-radiation/>, and [https://www.niehs.nih.gov/sites/default/files/news/newsroom/releases/2018/november1/11012018transcript\\_508.pdf](https://www.niehs.nih.gov/sites/default/files/news/newsroom/releases/2018/november1/11012018transcript_508.pdf) and <https://www.saferemr.com/search?q=ntp> and

<sup>39</sup> <http://www.5gappeal.eu/the-5g-appeal/>; see also, Dr. Martin Blank, PhD, Dept of Physiology and Cellular Biophysics, Columbia University, announcing the appeal early on and warning on wireless radiation, <https://www.youtube.com/watch?v=HgECRrabuZQ>; see also, <https://childrenshealthdefense.org/defender/5g-rollout-harm-regulation-profit/>.

<sup>40</sup> <https://phiremedical.org/wp-content/uploads/2020/11/2020-Non-Ionising-Radiation-Consensus-Statement.pdf>.

<sup>41</sup> A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation, 2022, <https://bioinitiative.org/conclusions/>; see also, Adverse health effects of 5G mobile networking technology under real-life conditions, May 1, 2020, <https://pubmed.ncbi.nlm.nih.gov/31991167/>; Wireless Radiation (RFR) – Is U.S. Government Ignoring Its Own Evidence for Risk? March, 28, 2019, <https://electromagnetichealth.org/electromagnetic-health-blog/u-s-gov-ignoring-own-evidence/>; Oxidative



7. New Hampshire Commission that studied the health impacts of wireless radiation found that levels below the FCC emission limits can be harmful.<sup>42</sup>
8. A comprehensive overview of the adverse biological effects on people and the environment is provided at [https://ehtrust.org/wp-content/uploads/EHT-5G-Health-and-Environment-Open-Letter-3\\_2021-3.pdf](https://ehtrust.org/wp-content/uploads/EHT-5G-Health-and-Environment-Open-Letter-3_2021-3.pdf).
9. Near Duluth, MN, a woman suffered 51 strokes after a nearby cell tower was “upgraded,” in addition to experiencing nausea, blind spots in her vision, orientation and balance difficulties.<sup>43</sup>
10. There have been clusters of sickness around cell towers. For example:
  - a. The Board of Health of Pittsfield, MA issued an emergency order to turn off a 4G cell tower that injured 17 residents most of whom evacuated their homes.<sup>44</sup> Children were found vomiting in their beds, pets were vomiting and residents were becoming ill.<sup>45</sup> Because Verizon threatened to sue, the Board of Health was compelled to rescind the order, and the residents are filing suit against the city.
  - b. In Rippon, CA when a cell tower was placed near an elementary school, 4 children (ages 10-11) got cancer (brain, liver, kidney) and 4 teachers got breast cancer. One child with brain cancer (glioblastoma) died in Aug 2024.<sup>46</sup> Since the tower was removed, it was reported that there were no more instances of cancer at the school.<sup>47</sup>
  - c. In an Idaho town after 5G cell towers were installed, it was reported that a cluster of residents developed atrial fibrillation (a-fib). One of those residents who had undergone surgery for a-fib is a plaintiff in a lawsuit against the telecom carrier which refuses to provide accommodation under the Americans with Disabilities Act.<sup>48</sup>
11. With respect to cell phone use, increases of brain cancer in the U.S. have been reported, with scientists attributing a high probability on RFE radiation from cell phone use.<sup>49</sup>
12. Eleven thousand pages of scientific peer-reviewed studies were submitted into the FCC’s docket showing harm within its limits for human exposure. In 2021, the DC Circuit Court of Appeals ruled against the FCC when it ignored those studies in deciding to maintain its current wireless emission limits for human exposure. In its remand ruling that the FCC’s decision was “arbitrary” and “capricious,” the court required the FCC to examine long-term exposure for the public, especially for children, and for the environment. The FCC has yet to comply with that order.

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Mechanisms of Biological Activity of Low-Intensity Radiofrequency Radiation, *Electromagnetic Biology and Medicine*, 35(2), 186-202, Yakymenko, I., Tsybulin, O., Sidorik, E., Henshel, D., Kyrlyenko, O., & Kyrlyenko, S. (2016), <https://pubmed.ncbi.nlm.nih.gov/26151230/>.

<sup>42</sup> <http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf>.

<sup>43</sup> <https://childrenshealthdefense.org/defender/marcia-haller-cell-tower-rf-radiation-sickness/>.

<sup>44</sup> <https://ehtrust.org/cease-and-desist-order-against-verizon-cell-tower-by-board-of-health-pittsfield-ma/>.

<sup>45</sup> <https://ehtrust.org/family-injured-by-cell-tower-radiation-in-pittsfield-massachusetts/>.

<sup>46</sup> See the lists of treatments and surgeries that this child endured before he died, <https://www.gofundme.com/f/support-the-ferrulli-family-in-memory-of-mason>.

<sup>47</sup> See beginning of video at [https://www.youtube.com/watch?v=-9TMTexPb\\_0&t=128s](https://www.youtube.com/watch?v=-9TMTexPb_0&t=128s).

<sup>48</sup> <https://childrenshealthdefense.org/press-release/chd-files-in-series-of-lawsuits-seeking-disability-accommodation-for-people-injured-by-rf-radiation-from-cell-towers/> and <https://childrenshealthdefense.org/defender/henry-hank-allen-chd-verizon-lawsuit-radiofrequency-radiation-cell-towers/>.

<sup>49</sup> See, e.g., [Brain Tumor Rates Are Rising in the US: The Role of Cellphone & Cordless Phone Use; The Incidence of Meningioma, a Non-Malignant Brain Tumor, is Increasing in the U.S.; New review study finds that heavier cell phone use increases tumor risk; Expert report by former U.S. govt. official: High probability RFE radiation causes brain tumors; and Cell phone and cordless phone use causes brain cancer: New review.](#)

## 5. Industry Knows of RFE Radiation Biological Hazards

Industry calls this radiation a pollutant in their cellular device protection plans.<sup>50</sup> Major insurance companies refuse to cover claims for personal injury from RFE radiation (referred to as “the next asbestos” and especially 5G which is called “off the leash” risk), imposing automatic policy exclusions.<sup>51</sup>

A study in 2000 commissioned by one of the major telecom carriers found links to cancer, leukemia, neurological disorders and cognitive impairment, with special caution for children and acknowledging those already disabled from the radiation.<sup>52</sup>

Telecom and cell phone manufacturers have filed patents to reduce the level of wireless exposure tied directly to health risks such as neurological disorders and cancer.<sup>53</sup>

## 6. Proposed Recommendations for EV Charging Stations for the EMS Disabled

Our recommendations are consistent with Congress’s declaration that:

“the Nation’s proper goals regarding individuals with disabilities are to assure equality of opportunity, full participation, independent living, and economic self-sufficiency.” 42 U.S.C. 12101(a)(7).<sup>54</sup>

Executive Order 13563 notes that an agency’s reasoned determination of benefits should justify the cost and that “each agency may consider and (discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.”<sup>55</sup> Congress has stated that discriminatory effects “cost[s] the United States billions

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<sup>50</sup> <https://ehtrust.org/wp-content/uploads/device-protection-brochure-nationwide.pdf>.

<sup>51</sup> <https://ehtrust.org/liability-and-risk-from-5g-and-cell-towers/>; <https://5gtechnologynews.com/insurance-companies-can-refuse-claims-related-to-electromagnetic-radiation-illnesses/>; <https://ehtrust.org/wp-content/uploads/Swiss-Re-SONAR-Publication-2019-excerpt-1.pdf> at 29; <https://ehtrust.org/key-issues/reports-white-papers-insurance-industry>.

<sup>52</sup> T-Mobile Deutsche Telekom commissioned study by the Ecolog-Institute, April 2000, “Mobile Telecommunications and Health Review of the Current Scientific Research in View of Precautionary Health Protection,” <https://ehtrust.org/wp-content/uploads/ecolog2000.pdf>.

<sup>53</sup> Swisscom patent, 2004 at <https://www.dropbox.com/scl/fi/nwdfklq7r7j2wwsipv7ws/SwissCom-Patent-application-2003-2004-WO2004075583A1-1-1.pdf?rlkey=liuy6175hamj24lbuszpe7vux&st=5p2oy0ji&dl=0>; see also, “Manufacturers Own Patents to Cut Radiation,” RCR Wireless, June 4, 2001 at <https://www.dropbox.com/scl/fi/Orfwys743dgegqifwu3ua/Manufacturers-own-patents-to-cut-radiation-RCR-Wireless-News.pdf?rlkey=e5hm46nyp9an6ugu4y005ldm3&st=xr7ocreh&dl=0>.

<sup>54</sup> <https://www.federalregister.gov/d/2024-18820/p-96>.

<sup>55</sup> <https://www.federalregister.gov/d/2024-18820/p-95>.

of dollars in unnecessary expenses resulting from dependency and nonproductivity.” 42 U.S.C. 12101(a)(5) and (8).<sup>56</sup>

Our recommendations are set forth below and are designed to provide, consistent with the goals set forth by Congress and EO 13563, equity in access and opportunities for economic self-sufficiency for the EMS Disabled.

## **Chapter 5 General Site and Building Elements – Appendix D to part 1191 – Technical**

Our recommendations relate to Appendix D to part 1191 – Technical – of Chapter 5 General Site and Building Elements. It is not known yet what level or kind of RFE radiation, if any, is or will be emitted from these various EV charging stations. However, our goal is to ensure that the EMS Disabled are not placed in life-threatening situations by exposure to any such RFE radiation. These recommendations would also serve the public who are living or working near these stations, as well as passers-by, to protect them from unnecessary exposure to RFE radiation.

**With respect to Section 709, these are recommendations for EV charger station design:**

### **Station Design:**

#### **1. Station Monitoring and Interfacing**

- a. Functionality for the purposes of system maintenance, status, revenue, security, video chat and other two-way communication functions should be over a hardwired connection.
  - i. The charger-to-grid communication should be over ethernet as wireless is not a requisite for operations under the open charge point protocol (OCPP), an application protocol that allows electrical vehicle supply equipment (EVSE) to talk through a central management system.<sup>57</sup>
- b. Communications with any vehicle or attached machinery participating or interfacing in charging operations should communicate with such station and supporting machinery via a hardwired connection.
  - i. That is already the existing protocol for two-way communications between an EV charging station and a vehicle.<sup>58</sup> The way that the vehicle, charger, and grid talk to each other is standardized through a hardwired connection and focused

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<sup>56</sup> <https://www.federalregister.gov/d/2024-18820/p-95>.

<sup>57</sup> <https://evadept.com/how-do-charging-stations-communicate-with-electric-cars/>.

<sup>58</sup> <https://www.wolfspeed.com/knowledge-center/article/whats-under-the-hood-ev-chargers-a-tale-of-standards-and-many-connectors/>.

on two main communication flows—between vehicle and charger, and between charger and grid.<sup>59</sup>

- c. Any wireless local area network for Internet access during use of the station should be provided as an OPT-IN service with the default state being OFF during idle periods.
- d. Transmitter power for Wi-Fi should be set in accordance with ALARA (as low as reasonably achievable) principles.

## **2. Charging station and attached charging interface cabling**

- a. Charging station should be constructed so that the external shell of the station is of a grounded magnetic shielding material to reduce localized magnetic and electrical field propagation from the station in the area of installation.
- b. Cabling to be used to deliver charging power to or from equipment or vehicles should be constructed of magnetically shielded flexible conduit or flexible magnetically shielded cable that is grounded to reduce field exposure during the handling of such cabling.
- c. An EV charging station interfaces with a vehicle through a standardized protocol and physical connections, and therefore does not need a wireless connection.<sup>60</sup> However, the cable needs to be shielded from magnetic fields and electrical fields (so long as magnetic fields are grounded). The charging station has a socket outlet (also known as a charging port or EVSE – electrical vehicle supply equipment) that supplies charging power to the vehicle.<sup>61</sup> The vehicle has a corresponding plug that interfaces with the socket outlet. That is already a hardwired connection.

## **3. Lighting**

- a. To the extent that there is LED lighting, it should be replaced with incandescent lighting. (Accounts of debilitating symptoms from LED lighting that would need accommodation are covered in comments by the Soft Lights Foundation submitted into this docket.)

**With respect to Sections 506 and 709, these are recommendations for eliminating electromagnetic interference (EMI) and providing shielding:**

- 1. EMI and Shielding

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<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

<sup>61</sup> <https://ev-lectron.com/blogs/blog/what-is-evse>.

- a. All installed stations supplying current for charging operations should be isolated from grid tie points and from local building supplied power branches, with isolation transformers or harmonics filtration at the station to reduce localized EMI being fed back into the local grid under ALARA principles.<sup>62</sup>
- b. If such stations are powered via a solar array, inverters from such an array should be isolated or a harmonic filter applied at the inverter supplying power to the station.
- c. Whichever form of EMI mitigation is needed should be assessed by a qualified power quality engineer, electrician or building biologist certified in power quality and waveform analysis.
- d. Any isolation or filtration device should be magnetically and electrically shielded to mitigate electrical and magnetic fields in the local area of installation.
- e. Any power cabling leading to charging sites should be laid in magnetically and electrically shielded conduit underground to the grid or local power supply point.
- f. Station spaces should be separated from each other with physical shielding to provide full radio frequency separation between each space should stations have any sort of wireless functions as indicated in the above section. Should stations be located under any metallic overhead covering such as a carport or canopy, space shielding shall extend vertically to said covering so as to provide complete isolation from reflected RFE radiation.
- g. Charging stations, because they use alternating current (AC) to direct current (DC) power conversions, will dump harmonics onto the electrical grid.<sup>63</sup> This creates RFE emissions and substantial magnetic field propagations from power lines and local power distribution networks. Therefore, a filter for the grid-side power feed wires on the charging station would be needed to protect the EMS Disabled using the EV charging station, as well as pedestrians and people living close by who would otherwise be the victims of RFE emissions, as well as dirty electricity. This can also lead to unnecessary wear on the local grid including the overheating of transformers and other equipment with the risk of fire.<sup>64</sup>
  - i. Harmonic currents are distortions of the fundamental frequency of AC power.<sup>65</sup> This phenomenon occurs due to the non-linear loads of electrical

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<sup>62</sup> <https://www.valeo.com/en/charger-inverter-for-electric-vehicles/> and <https://www.evengineeringonline.com/what-makes-dc-charging-more-complicated-than-ac-charging-in-evs/>

<sup>63</sup> <https://waterwelljournal.com/power-quality-issues-and-harmonics-in-electrical-systems-2/> and <https://www.testandmeasurementtips.com/dealing-with-displaying-power-harmonics/>.

<sup>64</sup> <https://electrical-engineering-portal.com/recognize-harmonics-symptoms>.

<sup>65</sup> <https://waterwelljournal.com/power-quality-issues-and-harmonics-in-electrical-systems-2/> and <https://www.testandmeasurementtips.com/dealing-with-displaying-power-harmonics/>.

devices and systems, such as: switching power supplies, imperfections in the power grid. When harmonic currents flow through power lines, they generate RFE emissions at frequencies that are multiples of the fundamental frequency, e.g. going from 50/60 Hz to 150/180 Hz.<sup>66</sup> These harmonics can propagate along the power lines, radiating magnetic and RFE emissions into the surrounding environment. The distance radiated from wiring can be quite substantial especially once it reaches the local grid where operating voltages are in the tens of thousands.

**With respect to Section 507, these are recommendations for EV charging station location:**

**1. Location of Station**

- a. Under the Section VI. Use Last Model for EV Charging Spaces,<sup>67</sup> only works if all stations on site follow the above construction criteria. Otherwise, the “Use Last” Approach cannot be utilized and a reserved station to provide explicit use for EMS Disabled individuals should be constructed.
- b. Stations should be located no less than 500 meters from homes, businesses, schools and hospitals to protect the EMS Disabled, residents, workers and patients from unnecessary RFE exposure and harmonics.<sup>68</sup>
- c. Signage. If any stations have active Wi-Fi that are not on an opt-in basis, there should be signage that warns of RFE radiation from Wi-Fi. However, the “opt-in” basis for Wi-Fi access should be the norm to protect the public and especially the EMS Disabled.

**Definitions used in these recommendations are:**

**ALARA:** stands for “as low as reasonably achievable.” The Center for Disease Control (CDC) defines it as follows: “ALARA means avoiding exposure to radiation that does not have a direct benefit to you, even if the dose is small. To do this, you can use three basic protective measures in radiation safety: time, distance, and shielding.”<sup>69</sup>

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<sup>66</sup> Ibid.

<sup>67</sup> <https://www.federalregister.gov/d/2024-18820/p-81>.

<sup>68</sup> See 500 meter recommendation by the New Hampshire Commission which studied the effects of RFE radiation for human exposure, <http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf> at 100.

<sup>69</sup> <https://www.cdc.gov/radiation-health/safety/alara.html#:~:text=Overview,if%20the%20dose%20is%20small>.

**EMI:** Electromagnetic interference, noise or harmonics in an electrical path or circuit caused by an outside source.

**Magnetic Shielding:** A specific type of shielding that is magnetically permeable, used to direct magnetic field lines away from a protected area, object, or individuals.

**RF Shielding:** Metallic sheeting or conductive paints used in the context of radio frequency and electrical fields in this document to reflect or divert fields via grounding of the voltage potential between source and receiver.

**Grounding:** Directing of stray currents and RF emissions to a ground source plane so as to mitigate the effects of such fields affecting equipment and living entities. Also includes electrical ground bonding per NEC standards.

**Isolation Transformer:** A type of transformer that provides complete electrical isolation between circuits with a 1:1 ratio between the primary and secondary winding.

**Power Quality Analyzer:** A dedicated device used to analyze power quality statistics such as waveform distortions, power factor, transients, RF interference and other EMI related noise components within a power system.

**Passive Harmonic Filter:** Characterized as a smaller component in power systems comprised of a capacitor and reactor designed to “block” or “trap” specific harmonic frequencies while allowing the fundamental (50/60 hz) to pass. Typically achieved by designing the filter such that its impedance is high at harmonic frequencies and low at fundamental frequencies.

## Conclusion

We look forward to working with the Access Board to bring to fruition the goals set forth by Congress and EO 13563, for equity in access and opportunities for economic self-sufficiency for the EMS Disabled.

Respectfully Submitted on Behalf of the EMS Disabled,

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## ADDENDUM A

### BIOLOGICAL EFFECTS OF RFE RADIATION

A 2019 Bevington study analyzed the prevalence of EMS within any given population.<sup>70</sup> Based on a population of 332.4 million people in the U.S.,<sup>71</sup> the numbers are staggering:

<b>Prevalence of EMS</b> <b>Percentages</b>	<b>Number of EMS</b> <b>in U.S.</b>
Can't work – 0.65%	2.16 million
Severe symptoms – 1.5%	4.99 million
Moderate symptoms – 5%	16.6 million
Mild symptoms – 30%	99.7 million

That means that based on those who can't work or who have severe symptoms, **over 7 million are EMS Disabled in the U.S.**

The correlation to proximity to RF-emitting sources is an important factor considering the following study correlating neurological symptoms near cell towers. The following chart shows a worsening of

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<sup>70</sup> "The Prevalence of People with Restricted Access to Work in Manmade Electromagnetic Environments," Journal of Environment and Health Science, <https://mdsafetech.files.wordpress.com/2019/10/2018-prevalence-of-electromagnetic-sensitivity.pdf>.

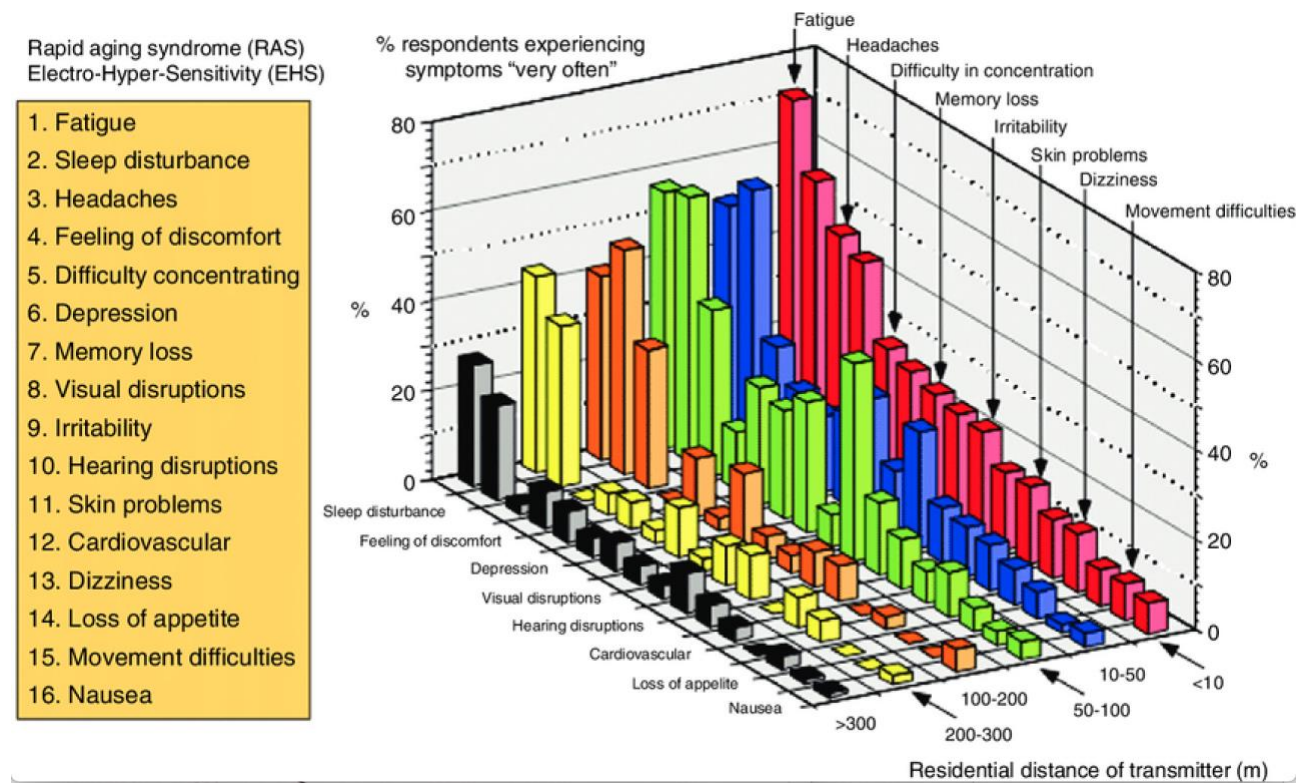
<sup>71</sup> <https://www.commerce.gov/news/blog/2022/01/us-population-estimated-332403650-jan-1-2022#:~:text=As%20our%20nation%20prepares%20to,since%20New%20Year's%20Day%202021.>

symptoms when closer to a cell tower but a lessening of symptoms when farther away from a cell tower.  
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<sup>72</sup> *Cell Tower Health Effects*, Physicians for Safe Technology, <https://mdsafetech.org/cell-tower-health-effects/>.

## Neurobehavioral Symptoms Near Cell Towers<sup>73</sup>



Symptoms experienced by people near cellular phone base stations; RFE radiation affects the blood, heart and autonomic nervous system.<sup>74</sup> Source: Santini, et al (France): *Pathol Biol.* 2002;50:S369-73. Chart compiled by Dr. Magda Havas.

There have been numerous reports of adverse health effects from RFE radiation and cell towers that have been placed in close proximity to people, either at their residences, businesses or other areas which they frequent.<sup>75</sup>

### (iv) EMS Disabilities are Agnostic

Those who are EMS Disabled cut across age and socio-economic strata, ranging from professionals and social workers to children. They include formerly high-functioning engineers, doctors and lawyers, a number of whom have become homeless from their RFE radiation injuries and disabilities.<sup>76</sup> A

<sup>73</sup> *Cell Tower Health Effects*, Physicians for Safe Technology, <https://mdsafetech.org/cell-tower-health-effects/>.

<sup>74</sup> Dr. Magda Havas, [https://www.researchgate.net/figure/Symptoms-experienced-by-people-near-cellular-phone-base-stations-based-on-the-work-of\\_fig2\\_258313941](https://www.researchgate.net/figure/Symptoms-experienced-by-people-near-cellular-phone-base-stations-based-on-the-work-of_fig2_258313941).

<sup>75</sup> *Cell Tower Health Effects* <https://www.saferemr.com/2015/04/cell-tower-health-effects.html>, Center for Family and Community Health, School of Public Health, University of California, Berkeley.

<sup>76</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

renowned doctor in this field, Dr. Golomb<sup>77</sup> observed that, although prior to their exposure they had no problem navigating in the world, after exposure their condition cost them up to 2 million dollars, many lost their homes and their access to basic services such as hospital care, post offices and libraries became restricted.<sup>78</sup> She states the common refrain is that people were either not aware of, did not hear about, or gave no credence to any possible health hazards connected to wireless infrastructure, until they themselves were injured.<sup>79</sup> She states that:

***The best and the brightest are among those whose lives – and ability to contribute to society – will be destroyed.*** High profile individuals with acknowledged electrohypersensitivity include, for instance, ***Gro Harlem Brundtland*** – the former 3-time Prime Minister of Norway and former Director General of the World Health Organization; [and] ***Matti Niemela***, former Nokia Technology chief ...<sup>80</sup> [Emphasis added]

Dr. Golomb further explains the plight of those unwittingly injured by RFE radiation, that:

[T]heir problems arose ***due to actions of others, against which they were given no control*** – and can be reversed, in most cases, if the assault on them is rolled back.<sup>81</sup>

In the case of a 59 year old social worker in the United Kingdom, she was found by her medical practitioner to be permanently disabled from exposure to RFE radiation:

***Mrs. Burns has a medical condition that renders her permanently incapable of undertaking any gainful work.*** There currently are no treatments available for her condition; avoidance of emissions is the only way to significantly reduce her symptoms.<sup>82</sup> [Emphasis added.]

Unfortunately, because this condition is not commonly understood, Mrs. Burns commented on the unrelenting discrimination that she has been exposed to:

I have worked in Health and Social Care for 35 years, supporting some of the most disabled and vulnerable members of our society and advocating to ensure their rights

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<sup>77</sup> Dr. Beatrice Golomb's Curriculum Vitae, <https://www.golombresearchgroup.org/pagecv>.

<sup>78</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>79</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>80</sup> Ibid.

<sup>81</sup> Ibid.

<sup>82</sup> "59 year old social workers wins 'early ill health retirement' for disabling 'Electromagnetic Hypersensitivity (EHS)'," Physicians' Health Initiative for Radiation and Environment Press release June 15, 2022, <https://phiremedical.org/wp-content/uploads/2022/06/Press-Release-EHS-Social-Worker-granted-long-term-ill-health-pension-UK-Named.pdf>.

have been upheld. ***To have been on the receiving end of societal prejudice, discrimination, ignorance and misunderstanding, has been devastating.***<sup>83</sup> [Emphasis added.]

That people are not being informed of the health hazards of RFE radiation, having it be forced upon them and their children without recourse, intruding into their homes, and then be discriminated against for the injuries they sustain as a result, ***should shock the conscience of any public official who took an oath to protect public health and welfare.***

Ultimately, Mrs. Burns “won her appeal for early ill-health retirement and will now receive full pension due to disabling Electromagnetic Hypersensitivity (EHS),”<sup>84</sup> as it is referred to in the U.K. She recounts the damage that exposure has done to her career:

My career has been important to me and I’m disappointed to be having to retire early instead of working beyond retirement age as I’d planned;<sup>85</sup>

. . . and to her life:

When exposed [to non-ionizing radiation, such as Wi-Fi and mobile phone emissions] she experiences dizziness, headaches, palpitations, sleep disturbance, vibrating sensations and sensitivity to noise and light. She feels pain in body areas which are nearest to the radiation sources, such as heat and pain at the ear from mobile phone use and abdominal pain from computer use.<sup>86</sup>

In another ground-breaking decision in the U.K. (and probably the world), a child was recognized as having EHS (referring to electro-hypersensitivity, as it is known in the U.K.) and was awarded accommodation, meaning that the school was mandated to make accommodation for the child’s condition<sup>87</sup>. This was decided in 2022 by the Upper Tribunal of the Administrative Appeals Chamber, which is to say that the decision is precedent setting in the U.K. In the child’s own words:

I am a 13-year-old girl with EHS. I have headaches, insomnia and other symptoms sometimes when exposed to WiFi or other kinds of EMF . . . These can become very severe . . . I can feel things and sense things most people can’t. This has protected my health . . . I have previously been unable to go to school, as the school I went to put in WiFi . . . If you have EHS and are struggling to stay in good health, or can’t go to school, or work, don’t give up . . . People are becoming more

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<sup>83</sup> Ibid.

<sup>84</sup> <https://ehtrust.org/major-uk-decision-awards-to-social-worker-on-the-basis-of-electromagnetic-hypersensitivity-ehs/>.

<sup>85</sup> Ibid.

<sup>86</sup> Ibid.

<sup>87</sup> <https://ehtrust.org/education-health-care-plan-ehcp-awarded-aug-2022-for-uk-child-on-the-basis-of-electromagnetic-hypersensitivity-ehs/>.

aware of this condition, and even if right now it seems like nothing will ever change, it already is.<sup>88</sup>

However, in 2015, seven years prior to this decision, a 15-year old girl in the U.K. who had developed headaches and bladder problems attributed to her exposure to Wi-Fi routers in her school did not experience a positive outcome.<sup>89</sup> The school not only failed to acknowledge her severe condition but punished the girl for leaving class rooms containing routers that were causing her condition. In an apparent cry for help, the girl then either accidentally or intentionally, hanged herself, as her mother describes she was driven to despair.

The Massachusetts Medical Association and California Medical Association have adopted resolutions for further studies on health outcomes from RFE radiation, calling for safety limits to protect human health.<sup>90</sup>

When the best and the most fit among us, such as firefighters, become injured from RFE radiation, then we know we have a big problem for the rest of the population. Firefighters in California were injured after a cell tower was installed on their station house property. They experienced headaches, and memory, sleeping and neurological disorders. SPECT brain scans found abnormalities associated with wireless radiation. Testing results showed delay in reaction time and difficulty in mental focus.<sup>91</sup> During actual emergency calls, they would sometimes become disoriented and could not respond to emergencies with the speed, cognition and orientation required to perform their duties at optimal capacity.

“Firefighters have reported getting lost on 911 calls in the same community they grew up in, and one veteran medic forgot where he was in the midst of basic CPR on a cardiac victim and couldn’t recall how to start the procedure over again...Prior to the installation of the tower on his station, this medic had not made a single mistake in 20 years.”<sup>92</sup>

Consequently, the International Association of Firefighters passed a resolution opposing, and calling for a moratorium, on the placement of cell towers near fire stations in the U.S. and Canada.

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<sup>88</sup> Iblbid.

<sup>89</sup> <https://www.pressreader.com/uk/daily-mail/20151201/281904477099139>

<sup>90</sup> *Massachusetts Medical Association Adopts Resolution on Wireless Safety Standards Reevaluation*, <https://ehtrust.org/massachusetts-medical-association-adopts-resolution-on-wireless-safety-standards-reevaluation/>.

<sup>91</sup> <https://www.iaff.org/cell-tower-radiation/>; International Association of Firefighters (IAFF) Votes To Study Health Effects of Cell Towers on Fire Stations, Call for Moratorium on New Cell Towers on Fire Stations Until Health Effects Can Be Studied, [https://ehtrust.org/wp-content/uploads/pr\\_iaff\\_vote-1.pdf](https://ehtrust.org/wp-content/uploads/pr_iaff_vote-1.pdf).

<sup>92</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

## (v) Descriptions of Injuries Suffered by Individuals and Children

Individuals and children who have suffered from exposure to RFE radiation describe their stories in Appendix C, incorporated herein by reference. In some instances, pseudonyms or the heading of “Anonymous” have been used to protect the privacy of these individuals. With each new “generation” of wireless technology, including 5G on their mobile devices, people are being further exposed to RFE radiation which they cannot avoid.<sup>93</sup> These emerging technologies require new policies to address the increasing number of EMS Disabled, especially among the children.

### (A) More Adverse Impacts on Children

Children are particularly vulnerable and are adversely affected by RFE radiation in their environment, homes and schools.<sup>94</sup> A special risk factor has been identified for children “due to their smaller body mass and rapid physical development, both of which magnify their vulnerability to known carcinogens, including radiation.”<sup>95</sup> The American Academy of Pediatrics has pointed out that children are disproportionately affected by cell phone radiation due to their lower bone density and amount of fluid in the brain allowing for absorption of greater quantities of RFE radiation than in adults.<sup>96</sup>

Children absorb more RFE radiation than adults, and fetuses are at even greater risk.<sup>97</sup> Children’s “brain tissues are more absorbent, their skulls are thinner and their relative size is smaller.”<sup>98</sup> RFE radiation penetrates more deeply into the skulls of children compared to adults,<sup>99</sup> as shown below in cell phone usage.<sup>100</sup>

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<sup>93</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>94</sup> *Children and Wireless Radiation*, <https://ehtrust.org/educate-yourself/children-and-wireless-faqs/>.

<sup>95</sup> *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 21, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, [https://bioinitiative.org/wp-content/uploads/pdfs/sec24\\_2012\\_Key\\_Scientific\\_Studies.pdf](https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf).<https://bioinitiative.org/>.

<sup>96</sup> *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 21, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, [https://bioinitiative.org/wp-content/uploads/pdfs/sec24\\_2012\\_Key\\_Scientific\\_Studies.pdf](https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf).<https://bioinitiative.org/>.

<sup>97</sup> *Why children absorb more microwave radiation than adults: The consequences*, Morgan, Kesar and Davis, Journal of Microscopy and Ultrastructure, Vol. 2, Issue 4, December 2014, 197-204, <https://www.sciencedirect.com/science/article/pii/S2213879X14000583>.

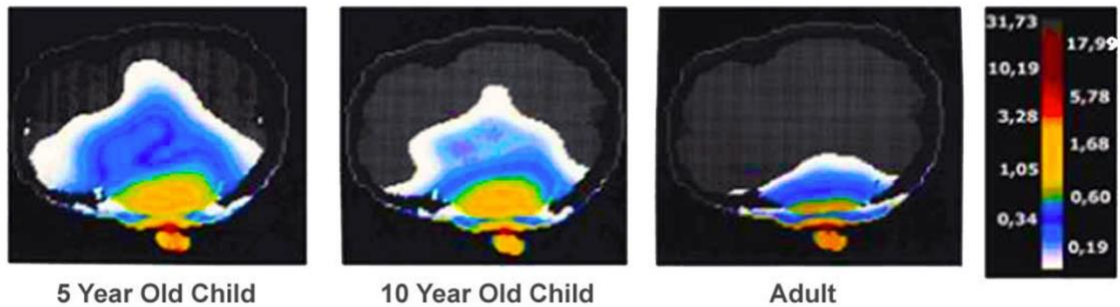
<sup>98</sup> *Ibid.*

<sup>99</sup> See, Dr. Melnick, London 5G Conference at 39:00, [https://www.youtube.com/watch?v=zSx\\_yDzxvM8&t=2295s](https://www.youtube.com/watch?v=zSx_yDzxvM8&t=2295s); <https://ehtrust.org/research-on-childrens-vulnerability-to-cell-phone-radio-frequency-radiation/> and <https://ehtrust.org/science/scientific-imaging-cell-phone-wi-fi-radiation-exposures-human-body/>.

<sup>100</sup> *Exposure limits: the underestimation of absorbed cell phone radiation, especially in children*, Gandhi, Morgan, Augusto de Salles, Han, Heberman, Davis, October 14, 2011, <https://pubmed.ncbi.nlm.nih.gov/21999884/>.



## Children are more vulnerable to RF microwave radiation.



Depth of absorption of cell phone radiation in a 5-year old child, a 10-year old child, and in an adult from GSM cell phone radiation at 900 MHz. Color scale on right shows the SAR in Watts per kilogram. Source: [Exposure limits: the underestimation of absorbed cell phone radiation, especially in children](#)

Source: Exposure limits: the underestimation of absorbed cell phone radiation, especially in children, Gandhi, Morgan, Augusto de Salles, Han, Heberman, Davis, October 14, 2011.<sup>101</sup>

Exposure to RFE radiation “can result in degeneration of the protective myelin sheath that surrounds brain neurons” and “[d]igital dementia has been reported in school age children.”<sup>102</sup> It also increases the risk of childhood leukemia.<sup>103</sup>

There are also neurological implications to RFE radiation exposure for children.<sup>104</sup> Cell towers near schools and Wi-Fi in schools are potentially hazardous to children.<sup>105</sup>

<sup>101</sup> Ibid.

<sup>102</sup> *Why children absorb more microwave radiation than adults: The consequences*, Morgan, Kesar and Davis, Journal of Microscopy and Ultrastructure, Vol. 2, Issue 4, December 2014, 197-204, <https://www.sciencedirect.com/science/article/pii/S2213879X14000583>.

<sup>103</sup> *Key Scientific Evidence and Public Health Policy Recommendations*, 2007, at 19, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, [https://bioinitiative.org/wp-content/uploads/pdfs/sec24\\_2007\\_Key\\_Scientific\\_Studies.pdf](https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2007_Key_Scientific_Studies.pdf).

<sup>104</sup> See generally, <https://ehtrust.org/research-on-childrens-vulnerability-to-cell-phone-radio-frequency-radiation/>; see also, <https://ehtrust.org/cell-towers-and-cell-antennae/compilation-of-research-studies-on-cell-tower-radiation-and-health/>.

<sup>105</sup> Dr. Magda Havas: WiFi in Schools is Safe. True or False?, <https://www.youtube.com/watch?v=6v75sKAUFdc>.

- Elementary school children who were exposed to high levels of RFE radiation generated from mobile phone base stations 200 meters from their schools “had a significantly higher risk of type 2 diabetes mellitus” than those exposed to lower RFE radiation.<sup>106</sup>
- Adolescent school children who were exposed to high levels of RFE radiation generated from mobile phone base stations within 200 meters from their schools had “delayed fine and gross motor skills, spatial working memory and attention” than those exposed to lower RFE radiation.<sup>107</sup>
- A ten-year old child testified of his cardiac condition being caused by exposure to RFE radiation in a library where he was being tutored.<sup>108</sup>

RFE radiation “... has toxic effects in pregnancy, to the fetus and subsequent offspring ... and is tied to developmental problems in later life, including attention deficit and hyperactivity.”<sup>109</sup>

Children born of mothers who used cell phones during pregnancy developed more behavioral problems by school age than those whose mothers did not use cell phones during pregnancy, with the following results: “25% more emotional problems, 35% more hyperactivity 49% more conduct problems and 34% more peer problems.”<sup>110</sup> A study involving 24,499 children found a 23% increase of emotional and behavioral difficulties.<sup>111</sup>

Therefore, RFE radiation can produce adverse health outcomes in vulnerable populations such as children, pregnant women and the elderly, and for the unsuspecting public who have not been informed of potential health hazards of RFE radiation.

### **Overview of Studies Showing Injury and Bio-Effects from RFE radiation Exposure**

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<sup>106</sup> *Association of Exposure to Radio-Frequency Electromagnetic Field Radiation (RF-EMFR) Generated by Mobile Phone Base Stations (MPBS) with Glycated Hemoglobin (HbA1c) and Risk of Type 2 Diabetes Mellitus*, Sultan Ayoub Meo et al, International Journal of Environmental Research and Public Health, 2015; [https://www.researchgate.net/publication/283726472\\_Association\\_of\\_Exposure\\_to\\_Radio-Frequency\\_Electromagnetic\\_Field\\_Radiation\\_RF-EMFR\\_Generated\\_by\\_Mobile\\_Phone\\_Base\\_Station\\_Tower\\_Settings\\_Adjacent\\_to\\_School\\_Buildings\\_Impact\\_on\\_Students'\\_Cognitive\\_Health](https://www.researchgate.net/publication/283726472_Association_of_Exposure_to_Radio-Frequency_Electromagnetic_Field_Radiation_RF-EMFR_Generated_by_Mobile_Phone_Base_Station_Tower_Settings_Adjacent_to_School_Buildings_Impact_on_Students'_Cognitive_Health), American Journal of Men's Health; <https://pubmed.ncbi.nlm.nih.gov/30526242/>.

<sup>107</sup> Meo, S. A., Almahmoud, M., Alsultan, Q., Alotaibi, N., Alnajashi, I., & Hajjar, W. M. (2018). *Mobile Phone Base Station Tower Settings Adjacent to School Buildings: Impact on Students' Cognitive Health*, American Journal of Men's Health; <https://pubmed.ncbi.nlm.nih.gov/30526242/>.

<sup>108</sup> Child With Heart Problems From Wireless: 5G Health Risks California SB 649 Hearing, [https://www.youtube.com/watch?v=OgNLR9fQOX4&list=PLT6DbkXhTGoDakSqp1i\\_7milpwGx4xMFq](https://www.youtube.com/watch?v=OgNLR9fQOX4&list=PLT6DbkXhTGoDakSqp1i_7milpwGx4xMFq).

<sup>109</sup> Letter by Dr. Beatrice Golomb, Professor of Medicine, UC San Diego School of Medicine, Aug. 22, 2017, <https://mdsafetech.org/wp-content/uploads/2017/09/golomb-sb649-5g-letter-8-22-20171.pdf>.

<sup>110</sup> *Key Scientific Evidence and Public Health Policy Recommendations*, Supplement 2012, at 8, David O. Carpenter, MD, Director, Institute for Health and the Environment University at Albany, Cindy Sage, MA, Sage Associates, [https://bioinitiative.org/wp-content/uploads/pdfs/sec24\\_2012\\_Key\\_Scientific\\_Studies.pdf](https://bioinitiative.org/wp-content/uploads/pdfs/sec24_2012_Key_Scientific_Studies.pdf).

<sup>111</sup> Miller AB, Sears ME, Morgan LL, Davis DL, Hardell L, Oremus M, Soskolne CL. Risks to Health and Well-Being From Radio-Frequency Radiation Emitted by Cell Phones and Other Wireless Devices. *Front Public Health*. 2019 Aug 13;7:223. doi: 10.3389/fpubh.2019.00223. PMID: 31457001; PMCID: PMC6701402, also available at <https://www.frontiersin.org/articles/10.3389/fpubh.2019.00223/full#B42>.

**Industry:** As early as April 2000, the ECOLOG Institute, which was commissioned by T-Mobil in Germany (parent company to T-Mobile in the U.S.), issued a report on its study of the risks of electromagnetic fields (EMFs) because of the rapidly expanding mobile telecommunications industry. The results were twofold: (1) findings of adverse health impacts associated with exposure to EMFs and (2) strong precautions and warnings to significantly lower the power of the EMFs to which the public would be exposed.<sup>112</sup> The findings included risks of cancer (of the central nervous system and testicular cancer), leukemia, damage to the immune system and cognitive impairments. It found that for all stages of cancer development, power flux densities of less than 1 W/m<sup>2</sup> were sufficient. “For some stages of cancer development, intensities of 0.1 W/m<sup>2</sup> or even less may suffice to trigger effects.”<sup>113</sup>

The ECOLOG Institute also addressed the issue of electrosensitivity. It emphasized the importance of developing *“a strategy for the research of the electrosensitivity phenomenon and its incidence, which would acknowledge the failure of traditional scientific methods to address the problem and allow the inclusion of the data available from the self-help groups and associations of the affected.”* [Emphasis added]

The Institute also provided precautions for vulnerable populations in “residential areas, schools, nurseries, playgrounds, hospitals and all other places at which humans are present for longer than 4 hours.”<sup>114</sup>

In an article, “Why Tech Leaders Don't Let Their Kids Use Tech,”<sup>115</sup> it's reported that technology executives restrict or forbid their children's use of the very technology that they are providing to the public, including “the makers of smartphones and tablets, of social media channels and game boxes.” Technology “titans” such as former Apple's Steve Jobs and Bill and Melinda Gates have admitted to placing restrictions on their children's use of technology. Chris Anderson, former Wired magazine editor and CEO of 3D Robotics, said that his kids “accuse me and my wife of being fascists and overly concerned about tech, and they say that none of their friends have the same rules. That's because we have seen the dangers of technology firsthand. I've seen it in myself, I don't want to see that happen to my kids.”<sup>116</sup>

**Federal Communications Commission (FCC):** The FCC admitted in 2019 that at least some types of RFE radiation can cause instantaneous non-thermal adverse effects with RFE radiation frequencies ranging

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<sup>112</sup> Mobile Telecommunications and Health/Review of the current scientific research, ECOLOG Institut, Hannover, April 2000, available at <https://docs.google.com/document/d/1Rd2c900GURf9YYQY-L2MHAFDYGIeT2R1tyMZYQhZTEA/edit>; ECOLOG is a research organization founded in 1991 by scientists from the [University of Hannover](#).

<sup>113</sup> Ibid.

<sup>114</sup> Ibid.

<sup>115</sup> “Why Tech Leaders Don't Let Their Kids Use Tech,” <https://kidzu.co/health-wellbeing/why-tech-leaders-dont-let-their-kids-use-tech/>.

<sup>116</sup> Ibid.

between 3 KHz and 10 MHz.<sup>117</sup> Typically, the FCC averages exposure levels over 30 minutes, which completely obscures the effects of the pulsating nature of RFE radiation and does not account for 24/7 exposure by the population or the constant pulsations of RFE radiation. To obtain a more accurate reading of RF emissions, the maximum power density and peak power density levels per millisecond should be recorded, because adverse health effects arise from the peaking and pulsating nature of RF emissions.<sup>118</sup>

### **Food and Drug Administration (FDA):**

In connection with studies conducted on 2G and 3G used in cellular communications, Linda Birnbaum, Ph.D., former Director of the U.S. NIEHS and former Director of the National Toxicology Program (NTP) spanning across the Department of Health and Human Services organizations which involves NIH, FDA and CDC, has stated:

- *“The phase I [NTP] studies established that non-thermal levels (<10C or no detectible change in temperature) of RFR exposure had toxicological implications in biological systems.” (pg. 9).*
- *“The NTP found and published evidence of DNA damage after only 90 days of exposure.” (pg. 9).*
- *“Overall, the NTP findings demonstrate the potential for RFR to cause cancer in humans. The independent peer review of the entire proceedings carried out by toxicologists, pathologists and*

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<sup>117</sup> Proposed Changes in the Commission’s Rule Regarding Human Exposure to Radiofrequency Electromagnetic Fields, 34 FCC Rcd 11687, 11743-11745, ¶¶122- 124 & nn. 322-335 (2019).

<sup>118</sup> Human-made electromagnetic fields: Ion forced-oscillation and voltage-gated ion channel dysfunction, oxidative stress and DNA damage (Review) (2021) Pangopolous DJ, et al. International Journal of Oncology. August 23, 2021. <https://pubmed.ncbi.nlm.nih.gov/34617575/>.

Computational modeling investigation of pulsed high peak power microwaves and the potential for traumatic brain injury. Sci Adv. 2021 Oct; 7(44). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8555891/>. "These studies reveal that the MAE threshold depends on the energy in a single pulse (not the average power density) for sufficiently short pulses [e.g., 32 µs in (46)], and peak power densities of 102 to 105 mW/cm<sup>2</sup> have been known to cause auditory effects in human participants (45)."

“Diplomats' Mystery Illness and Pulsed Radiofrequency/Microwave Radiation,” Dr. Beatrice Golomb. Neural Comput. 2018 Nov; 30(11):2882-2985. <https://pubmed.ncbi.nlm.nih.gov/30183509/>; “Reported facts appear consistent with pulsed RF/MW as the source of injury in affected diplomats.”

“5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them,” Martin L. Pall, PhD, <https://peaceinspace.blogspot.com/files/5g-emf-hazards--dr-martin-l-pall--eu-emf2018-6-11us3.pdf>.

Belyaev, I., Dean, A., Eger, H. et al. "EUROPAEM EMF Guideline 2016 for the prevention, diagnosis, and treatment of EMF-related health problems and illnesses." Rev environ Health. 2016;31(3):363-397. Doi:10.1515/reveh-2016-0011.

B. W. G. (2012). "Bioinitiative Report 2012: A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation."

*statisticians independent of the NTP staff conducted March 26-28, 2018, concluded that there was 'clear evidence of cancer,'...exposure to RFR is associated with an increase in DNA damage." (pg. 11).*

Since completion of the \$30 million NTP study (originally sponsored by the FDA to research possible biological effects of RFR), the results have been replicated by the Ramazzini Institute in another study using exposures below the FCC thermal thresholds (simulating emissions from cellular base stations and wireless transmitters).<sup>119</sup>

### **Facts and Statements by U.S. Preeminent Scientists and Experts In the Area of MW/EMF/RFE radiation Research**

As shown by the following facts and statements by the United States' preeminent scientists and experts in the area of wireless RFR research, it has become well established that wireless radiation exposure produces or has the recognized potential of producing biological effects.

- 1 In 2011, the World Health Organization's (WHO) International Agency for Research on Cancer (IARC) classified wireless radiation as a Group 2B possible carcinogen.<sup>120</sup> This conclusion was based upon an increased risk of malignant brain cancer (glioma) identified in those who used cell phones for over 10 years for an average of 30 minutes per day.

Anthony B. Miller, M.D., Senior Epidemiologist, IARC, states in a 2018 updated assessment to the 2011 IARC classification of wireless radiofrequency radiation (RFR), "***When considered with recent animal experimental evidence, the recent epidemiological studies strengthen and support the conclusion that RFR should be categorized as carcinogenic to humans (IARC Group 1).***"<sup>121</sup>

- 2 "Since 2011, the scientific evidence linking wireless to cancer has significantly increased and today several published reviews conclude that the current body of evidence indicates cell phone radiation is proven Group 1 human carcinogen (Miller et al 2018, Peleg et al 2018 Carlberg and Hardell 2017, Belpomme et al 2018)." <sup>122</sup>
- 3 Christopher J. Portier, Ph.D., former director of the National Center for Environmental Health at the Centers for Disease Control and Prevention (CDC) and a scientific advisor for the WHO, reviewed the most recent body of scientific research and literature to look at the feasibility of RFR causing specific brain tumors in humans and concluded in March, 2021:

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<sup>119</sup> <https://www.saferemr.com/2018/03/RI-study-on-cell-phone.html>; see also, [https://www.niehs.nih.gov/sites/default/files/news/newsroom/releases/2018/november1/11012018transcript\\_508.pdf](https://www.niehs.nih.gov/sites/default/files/news/newsroom/releases/2018/november1/11012018transcript_508.pdf).

<sup>120</sup> [https://www.iarc.who.int/wp-content/uploads/2018/07/pr208\\_E.pdf](https://www.iarc.who.int/wp-content/uploads/2018/07/pr208_E.pdf).

<sup>121</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0013935118303475>.

<sup>122</sup> <https://ehtrust.org/science/whoiar-position-on-wireless-and-health/>.

- ***"Given the human, animal and experimental evidence, I assert that, to a reasonable degree of scientific certainty, the probability that RF exposure causes gliomas and neuromas is high."***<sup>123</sup>

4 Ronald Melnick, Ph.D., retired NIEHS senior toxicologist who won the American Public Health Association's 2007 David P. Rall Award for public health advocacy states:

***"I strongly feel health and regulatory agencies should promote policies that reduce cell phone radiation exposure, especially for children and pregnant women. The agencies in the U.S. say, "if you are concerned" rather than "we are concerned." Agencies should be clear and straightforward educating the public on "here is what you should do."***

***"The risk can be greater for children than adults due to the increased penetration of the radiation within brains of children and the fact that the developing nervous system is more susceptible to tissue damaging agents."***<sup>124</sup>

5 The American Academy of Pediatrics, a non-profit professional organization of 60,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists, stated in a letter to the FCC on July 12, 2012:

***"Children ... are not little adults and are disproportionately impacted by all environmental exposures, including cell phone radiation. In fact, according to IARC, when used by children, the average RF energy deposition is two times higher in the brain and 10 times higher in the bone marrow of the skull, compared with mobile phone use by adults."***<sup>125</sup>

6 New Hampshire formed a State Commission to examine whether wireless radiation is harmful to human health. The majority of that New Hampshire State Commission came to the conclusion that exposure to wireless radiation is harmful to human health and the environment. The commission was convened through bipartisan legislation<sup>126</sup> that was signed by the governor. Commission membership included unbiased experts in fields relating to health and radiation exposure, and they issued their Final Report in November 2020.<sup>127</sup>

#### ***7 Scientific Evidence Invalidates Health Assumptions Underlying the FCC Exposure Limit Determinations for Radiofrequency Radiation***<sup>128</sup>

The International Commission on the Biological Effects of Electromagnetic Fields (ICBE-EMF) published a paper which reviewed the studies and assumptions made in determining the current FCC limits,

<sup>123</sup> <https://www.saferemr.com/2021/03/expert-report-by-former-us-government.html?m=1>.

<sup>124</sup> [https://www.youtube.com/watch?v=zSx\\_yDzxvM8&t=2295s](https://www.youtube.com/watch?v=zSx_yDzxvM8&t=2295s)

<sup>125</sup> <https://ehtrust.org/wp-content/uploads/American-Academy-of-Pediatrics-letter-to-the-FCC-July-12-2012.pdf>

<sup>126</sup> <https://legiscan.com/NH/text/HB522/2019>.

<sup>127</sup> <http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf>.

<sup>128</sup> [https://icbe-emf.org/wp-content/uploads/2022/10/ICBE-EMF-paper-12940\\_2022\\_900\\_OnlinePDF\\_Patched-1.pdf](https://icbe-emf.org/wp-content/uploads/2022/10/ICBE-EMF-paper-12940_2022_900_OnlinePDF_Patched-1.pdf).

established 27 years ago in 1996, and found that those assumptions were incorrect and cannot form the basis currently to protect the public.

In the late 1990s, the FCC adopted RFE radiation exposure limits to protect the public and workers from adverse effects. However, they:

. . . were based on results from behavioral studies conducted **in the 1980s involving 40–60-minute exposures in 5 monkeys and 8 rats**, and then applying arbitrary safety factors to an apparent threshold specific absorption rate (SAR) of 4 W/kg. The limits were also based on two major assumptions: any biological effects were due to excessive tissue heating and no effects would occur below the putative threshold SAR . . .

The paper concludes that extensive research on RFE radiation during the intervening 25 years shows that the assumptions are invalid and “continue to present a public health harm” with no adequate protections for the general population for short -term and long-term exposures, including children and those acutely affected by exposure.<sup>129</sup>

Adverse effects observed at exposures **below** the assumed threshold SAR include non-thermal induction of **reactive oxygen species, DNA damage, cardiomyopathy, carcinogenicity, sperm damage, and neurological effects, including electromagnetic hypersensitivity . . .**

The paper makes an urgent appeal for much needed “health protective exposure limits for humans and the environment.”<sup>130</sup>

Public exposure to RFE radiation is chronic – 24/7, 365 days a year. Therefore, there is an entire spectrum of conditions produced ranging from neurological and immunological disorders to DNA damage (a precursor to cancer).

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<sup>129</sup> Ibid.

<sup>130</sup> Ibid.



## ADDENDUM B

### THE RANGE OF RADIO FREQUENCY ELECTROMAGNETIC RADIATION

#### INCREASED EXPOSURE FROM 5G/4G "SMALL" CELL ANTENNAS LOCATED CLOSE TO PEOPLE

A study entitled "[Very high radiofrequency radiation at Skeppsbron in Stockholm, Sweden from mobile phone base station antennas positioned close to pedestrians' heads](#)" published in *Environmental Research* by Koppel et al. (2022) created an RF heat map of RF measurements, finding that the highest RF measurements were in areas of close proximity to the base station antennas. The researchers concluded with recommendations to reduce close proximity placements such as positioning antennas "as far as possible from the general public" like in high-elevation locations or more remote areas.

A study entitled "[Measurements of radiofrequency electromagnetic fields, including 5G, in the city of Columbia, South Carolina, USA](#)" published in the *World Academy of Sciences Journal* found the highest RF levels in areas where the cell phone base station antennas were placed on top of utility poles, street lamps, traffic lights or other posts near to the street. The scientists compared their [2022 findings](#) to an earlier [2019 published review](#) on the mean outdoor exposure level of European cities and they found the South Carolina measurements to be higher.

The researchers concluded that the highest exposure areas were due to two reasons: cell phone base antennas on top of high-rise buildings provide "good cell coverage reaching far away, but creating elevated exposure to the radiofrequency electromagnetic fields at the immediate vicinity; and cell phone base station antennas installed on top of utility poles have placed the radiation source closer to humans walking on street level."

Source: Environmental Health Trust



Figure 7. Gervais Street: Cell phone base station antenna placed close to street level and causing high exposure to pedestrians and nearby café visitors (exposure scenario illustration). The antenna appears camouflaged and seemingly part of a utility pole. The measurer only discovered the antenna due to the high radiofrequency levels in the vicinity.

Source: Environmental Health Trust

## ADDENDUM C

### THE EMS DISABLED – IN THEIR OWN WORDS

Note: Some names have been truncated, changed or anonymized to protect individuals' privacy.

October 3, 2023

To Whom It May Concern,

In 2009 my husband bought me an iPad for Christmas. I loved it and was on it a few hours every day. Within a few weeks, however, I noticed that I would be nauseous after using it. I set it aside and have not picked it up since.

Soon afterward, I became aware that I was sensitive when texting on my Blackberry which gave me the feeling of sharp metal shards in my fingertips. It was affecting my manual dexterity. I now use a corded landline phone and mail for most all my communication. I cannot use wireless devices without adverse health effects. Myself, and others like me, need to have alternate ways to communicate (landlines, hardwired devices, mail) because wireless negatively impacts our health.

D.S.

EMS Disabled, Colorado

~\*~

Department of Justice, Civil Rights Division

28 CFR Part 35, CRT Docket No. 144, AG Order No. 5729-2023, RIN 1190-AA79

Nondiscrimination on the Basis of Disability; Accessibility of Web Information and Services of State and Local Government Entities

Notice of Proposed Rulemaking

October 1, 2023

Department of Justice:

Thank you for this opportunity to share my response to the NPRM with you.

I have been disabled by environmental exposures since 1981. For the first years the electromagnetic hypersensitivities were especially painful and disorienting, but I learned to adapt to the dystonic symptoms (falling, clenched muscles, losing my ability to speak) by taking certain measures. For example:

- a.) I avoided sidewalks with overhead power distribution lines;
- b.) never crossed Market or Mission Streets over the Bay Area Rapid Transit train lines;
- c.) never approached S.F. General Hospital from the front, to avoid power generators under the street;
- d.) I avoided being anywhere that was line-of-sight from Sutro tower;
- e.) walked/rolled along the outer edge of the sidewalk, as far as possible from neon signs in shop windows;
- f.) other measures, many others.

It took several years but I learned to use my wheelchair, attendant, driver, and oxygen to go out. My neurology was severely damaged but sometimes I just risked the hit.

These and numerous other adaptations I learned by experiment. I'd never heard of anyone whose disability was "triggered" like mine was. For years, in no way could I explain the invisible barriers and constraints that held me back, except that they coincided with electromagnetic and radiofrequency exposures.

Eventually I found a support group for people with environmental illnesses, and began answering the "warm line" I&R calls from dozens of other people who'd been traumatized and isolated by environmental factors. I was learning some valuable principles from the S.F. Bay Area disabled community, too.

In more recent years, friends helped me move to the remote high desert in Arizona. I have a small, safe enough house, with a landline-wired phone and computer, and a long driveway where numerous electrically and chemically sensitive guests have camped or parked after they've become hypersensitive, unhoused, and without work or family for the first time.

There's a lot to get used to, primarily the estrangement from everything we loved and thought we knew. Despite the numerous promises of the A.D.A., people with environmental illnesses have no access to "public" programs and facilities like hotels, housing, homeless shelters, vocational and occupational rehab, hospital and medical care, the bank, taking classes, most shopping or chores, the sidewalks.

I can get around a lot of the time now, and think relatively well enough to take care of the daily needs. I have a hard-wired lap-top computer, shielded in metals, and can now do Word, e-mail, and print.

The old-fashioned electronics that first disabled me posed terrifying barriers but in retrospect they seem simpler, once I learned that they were “only” extremely painful, debilitating, and alienating. I could lessen their damage, to some degree, by isolating myself.

But now?

Now there doesn't seem to be a way to defend myself from the new communications technologies like cell phones, and I expect this will be made worse by 5-G. It took hard work to opt out of having a “smart” meter installed on my own house. There is hardly a single place to go, certainly none in public, to get far enough away to avoid aggravating the neurological problems. I don't know where else to live.

People who are ignorant about our situation invariably suggest that we “just” (like it is simple) get cell phones, use computers to work from home, for medical or legal appointments, and to order our food and other necessities. It is suggested that we could expand our social interaction through Facebook or similar.

This assumption that we can “hop on” computers or cell phones for daily tasks is dead wrong. It reflects extreme naivete to assume that we can be in a room with a computer for more than a few minutes if at all, or use cell phones, for example, to call for help when there is a fire, injury, assault, or a vehicle wreck. Only phones with real wiring are safe and don't hurt to use, same with computers.

Activities that are inaccessible now, due to wifi, include going to parks, campgrounds, and the library. I can't enter Lowe's, Home Depot, Ace, or most other stores without being overcome by their wifi.

I used to use an outdoor ATM machine, but now it hurts, and the flashing pictures and movement on the screen make it all but unusable. Managing inside the bank, by myself, is out of the question.

There is one public pay phone where a person can call out with coins in my town. It is in front of Circle K, surrounded by fluorescent lights and gas fumes, and a person should never go there after dark.

I get terribly disoriented using the computer to send for things, so my landline phone is the only option. I'm very concerned that the phone company where I live might switch to cellular only. That would mean no phone, no computer. Some of us are increasingly isolated by this true and actual “digital divide”.

A lot of the roads out where I live are slick mud when the washes run, during monsoon. Last time I called Triple AAA Premier, they wouldn't help me because there was no cell phone I could use.

Same when I needed to reset my computer after it got hacked. The Communications Company wouldn't help because I didn't have a cell phone they could call.

The NPRM says it aims to improve the lives of people with the four relevant disabilities, but thousands of the rest of us have disabilities that we actually do find extremely relevant. It is wrong to allow the technology that means life or death to us (wired phones for example) to be made even less available than it already is.

Susan Molloy

Snowflake, Arizona 85937

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Department of Justice, Civil Rights Division

28 CFR Part 35

CRT Docket No. 144, AG Order No. 5729-2023

RIN 1190-AA79

Nondiscrimination on the Basis of Disability; Accessibility of Web Information and Services of State and Local Government Entities

Notice of Proposed Rulemaking

September 29, 2023

Dear Department of Justice,

I am a disabled individual writing to express the devastation that I currently suffer due to wireless technology and electronics. It will become even more life-threatening, just impossible to endure, with any and all expansion of wireless technology.

I am elderly and frail, and have severe mobility impairments which are made much worse with exposure to electronics, any electrical devices that are “smart” – those marketed (falsely) as “saving energy”.

The energy-saving features are advertised to promote sales but the reality is that they create electromagnetic fields and radio frequencies that travel on every wire inside a dwelling.

There is a growing body of evidence showing harm to humans. The sources of harm, among many others, include appliances, new “energy saving” light bulbs, heart monitors and certain other medical devices, and the so-called “information technologies” like routers and modems

I fall easily. I have severe osteoporosis. A conventional “Life Alert”-type personal wireless necklace would pose an enormous medical threat to me.

I am concerned about losing my copper landline phone. It is the only form of communications that I can tolerate in my house due to my disability.

Without my copper landline phone connection, which is known as “POTS” (short for “plain old telephone service”), ***I will have no way to access emergency services such as the ambulance, my doctor, EMTs, or personal care workers.***

***My landline is my lifeline.***

***It is my only connection to the outside world. It is medically necessary that I am able to keep it.***

I reside in an older home that my parents built. My inheritance is a life estate here. I have been fighting for nine years to keep my old analog electric meter. I am not able to tolerate “smart” meters. This home is my one and only refuge.

No elder-care facility or nursing home is safely accessible to me.

Accessibility for people with disabilities does not include only mobility, sight, hearing, cognitive, and manual dexterity impairments. It includes access for all disabled individuals.

We need accessibility not just publicly but within our own private residences. We should not have our lives snuffed out by 5-G antennas beaming into our private residences.

We need electricity and appliances that are safe, not monitored with “smart” meters. We desperately need our copper landlines so we have communications without RF Radio Frequency and harmful harmonics injuring our brains.

My physician has written over and over that if my sensitivities/disabilities are not accommodated, I cannot survive.

Please step out and help me have accessibility accommodations so I can have a chance to survive.

***I urge you to consider this letter a plea for my very life.***

Thank you for your assistance in this life and death situation.

Sincerely,

D.D. - Pennsylvania

~\*~

**Department of Justice Seeks Public Comment on Proposed Rule to Strengthen Web and Mobile App Access for People with Disabilities, Oct 3, 2023**

**Personal Statement**

**Nancy Van Dover, DVM, OMD, Dipl Acup**

As a person with EMS (electromagnetically sensitive) disability, I would like you to understand how critically important safe communications are for our large, and very “relevant”, disabled class. We need to be able to communicate through the mail, corded landline phones and for those who physically can – internet on wired computers. Public access has not been possible for me for four years due to ubiquitous wireless radiation. For me, this RFE radiation exposure is life threatening.



So, I cannot go to offices to do business or get information. I do not even have safe in-person medical care although I pay for Medicare.

Telemedicine on my wired computer, and Home Health--- with accommodations to have no wireless brought into my EMS-safe home---are my only options.

*QUESTION: I need to know if your proposed rule will reduce or eliminate my ability to receive safe Home Health or Paramedic accommodations where paper records are used instead of a laptop, tablet or cell phone by the third party coming to my house?*

My life was threatened, when my previously safe home was put in the path of new cellular emissions. It is in direct line of sight to my home. On January 23, 2020, presumably the date on which cellular antennas were altered or activated, I started to feel many of the symptoms I would get when I had tried to go into areas with wireless technologies. I was experiencing brain (cognitive) and heart symptoms, in particular. Although already suffering from EMS disability to a degree, I had never experienced symptoms of the magnitude I experienced beginning on January 23, 2020.

I got my radiofrequency (RF) meter out to check the levels in my house. It was too high for me and steadily increased over a two-week period forcing me to purchase RF shielding for my house. That two-week overexposure made me sicker than I had ever been with EMS, so I tried to reach out for some type of medical assistance. None could be found to come to my house, there was no safe place for me to be taken so Paramedics were called to check on me. I told them by phone, I would only permit them if they followed my EMS-safe protocol; as few people and vehicles as possible, no wireless devices allowed.

Three Paramedics and five deputies (including the one I had given detailed instructions to) came but did not follow my protocol, were totally ignorant of this condition and injured me even more with radiation they had on their belts. I had a hard time even getting them to back away. When the Paramedics tried "airplane mode" for their phones, they still emitted 200x's more radiation than what was safe for me. After their "visit" the EMS heart arrhythmia worsened and

my BP remained very high for weeks, insomnia became severe, chronic migraine developed again, my immune system was depressed. I did not think I would make it through the night.

It is apparent that First Responders, medical practitioners, and others, need to become aware of this disability and taught about EMS-safe protocol---to understand what a medical alert bracelet related to this disability means. My own medical instructions include not to put me in an ambulance or to take me to a medical facility that is not EMS-safe.

*QUESTION: Will this proposed Rulemaking make it even more difficult for people with EMS disability to get EMS-safe medical care? Will this force medical professionals to only use wireless in record keeping and communications, for instance? Will it make it impossible for law enforcement to remove their wireless devices when coming onto the property of an EMS disabled person?*

The medical “Standard of Care” cannot be based on wireless equipment and record keeping. Law enforcement and First Responders also need to be free to make accommodations by removing wireless devices.

Accommodations for people with EMS disability must be encouraged and enabled by the DOJ. Title I, II and III entities need to be instructed to do this with EMS-safe protocol and adequate Building Guidelines to wire record keeping, as well as security and internet systems so at least part of the building can be safe for this portion of the population.

Just as you are trying to assist four disabled classes in this rulemaking, the EMS disabled class must be considered “relevant” for communications that are safe and efficient, especially considering there is usually no option to go in person. Many people, including myself, when exposed to EMF’s (electromagnetic fields) develop blurry vision, severe tinnitus, cognitive impairment, and some complain of manual dexterity problems, like numbness and prickling sensations in their fingers.

More access barriers to services need to be removed, not erected, so an EMS disabled person can have their legally protected access. Improving, not reducing, phone and mail communications is needed by more and more people disabled by EMS.

Thank you for reconsidering during your rulemaking, making this disabled class relevant and our communication requirements as important as all other citizens.

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### **Anonymous**

I have cognitive and manual dexterity disabilities. I have a brain injury that causes cognitive and neurological problems. When I’m close to wireless devices, or near wireless devices for a length of time, I have intolerable pain in my head, I become incoherent in my conversation, my voice becomes slurred, I cannot walk straight, my limbs curl inward, it becomes difficult to use my arms and legs, and I experience excruciating pain. These symptoms occur, or get worse, when I’m near wireless internet and apps, and when I move away from these the symptoms either go away or significantly diminish.

I had a mental health crisis and called my county's crisis management line. I told them I could not be near wireless devices, and I needed ADA accommodation. Though they concluded that I needed crisis help, they said they would not meet me without their staff using their wireless internet and apps. I was prevented from getting services in a crisis because of wireless apps and internet.

A couple years previous to this, I asked to meet with my county representative, and as a reasonable accommodation, I asked to meet in a room where there wasn't wireless technology because of my symptoms in which I can't function. They said they could put me in a room without wireless technology; however they couldn't control the rooms adjacent, which had wireless internet. When I met with him, my symptoms that flared, as mentioned previously, were on the edge of getting intolerable, and I mustered through the meeting. At the meeting, the representative said a few times that he could not get me information as he would need to get on wireless communications in order to get me the information. After the meeting, I was so ill that I was incapacitated for a few weeks with symptoms including: pain in my head that so severe that I couldn't function, my head swelled, I couldn't communicate my thoughts, I was dizzy and couldn't take showers, I stumbled when I walked, my memory and concentration were diminished. Though I wanted to follow up with my representative, I couldn't follow up, as it required me to get on emf emitting technologies to get back in touch with the representative. My representative asked that I follow up with him with information; however I was unable to even call him because I could no longer get near any emf emitting device.

For a couple years when I could not use touch pads at grocery stores, as getting near them would create severe pain, and the debilitating symptoms I mentioned above. They would make me feel dizzy, nauseous, my thoughts began to feel extremely confused, and I had to get away from them as fast as I could, as these symptoms were debilitating. I also couldn't go in and out of many grocery stores,(as well as other stores,) as being near the wireless internet and apps that the grocery store uses made my disability worse with the symptoms I've described. The excruciating pain, the dizziness, and cognitive and dexterity impairments became severe. Many times, I stopped going to many grocery stores altogether as the symptoms were too severe to tolerate. I had to get someone else to get me groceries. I have a friend who had the same problem, however she would faint, and also had to stop going into the grocery store, as well as other stores.

I made an appointment with an orthopedist's office as I fractured my foot. The doctor's office, though a very large business, would not accommodate me because they said they would not use any protections for me on any of their wired apps and web-based services. I was prevented from having medical help to get my foot properly x-rayed and treated, and never saw an orthopedist. Instead I had to heal my foot at home without any foot doctor.

I have this same issue with a dentists' using wireless apps and internet, and would not offer me any ADA accommodation, and I have not been able to see a dentist in 3 years.

S.B. – North Carolina

~\*~

Below is a letter from “Helen” sent to several City and County officials in Colorado, seeking help with housing. She did not receive any help even though they are building new senior, low-income housing using federal money. This disabled class cannot be ignored any longer. Lives are at stake and our federal government has a duty to protect their citizen’s rights, to make sure that at least a safe home can be found.

February 2, 2021

To Whom It May Concern,

I’m a 66 year old single woman who became EMS (electromagnetically sensitive) from exposure to EMF’s at several of my jobs.

The job where I had the most long-term exposure was when I was a professional Optician in a medical center in Boulder, CO. I operated a large machine that cut eyeglass lenses. Over time I got too ill to work. I lost my livelihood, my condo, my retirement savings, my partner, my well-being.

I don’t have much of a life because avoiding EMF’s is very time consuming and limiting. The EMF’s adversely affect my brain and my sleep making me EMS Disabled.

I got ill 18 years ago and it has left me in poverty, isolation, and I have a big loss of freedom, feeling safe, and feeling well. I have no family that can help me. I need help and protection from EMF’s as I find it impossible to feel better living in housing that isn’t EMF safe.

In my subsidized apartment I get bombarded from high levels of RF’s coming from my neighbor’s wireless devices; It’s like being forced to breathe second-hand smoke. And, I also have high levels of magnetic EMF’s surging randomly from my circuit breaker in a 14 foot radius. Then much of my apartment is not usable, the kitchen, living room, and bathroom. I need to live in a low-income house where I can avoid neighbor’s EMF’s and where I can have more control over reducing EMF’s.

I want to move back to Colorado, and desperately need an EMF safe place to live, walk, and hopefully a road that doesn’t have strong cell tower signals on my way to the grocery store.

Thank you.

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**Lauren, Upper West Side, Manhattan**

My name is Lauren and I live on the West side of midtown Manhattan where I have lived for many years.

On Feb. 21, 2020, nine “5G” cell towers began operating across the street from my apartment on the roof of 325 W. 37<sup>th</sup> St., approximately 40-90 feet from my apartment windows. I had a safe place to live before cell towers were installed, changing my life overnight.

During the two weeks following the start of their operation, I experienced severe symptoms, which my doctor confirmed:

- Constant tinnitus
- Shortness of breath
- Increased pain in eyes, limiting visual function
- Insomnia
- Severe migraines
- Burning skin
- Palpitations
- Vertical disturbances through cranium and occipital region simultaneous with horizontal intercranial disturbances extending through the ear canal and sharp stabbing pains extending into all 4 extremities

When I entered my apartment, within minutes my symptoms would increase, with severe damage and pain to my central nervous system. My apartment was no longer safe. I would awaken in the night, gasping for breath.

On March 11, 2020, within a month of the initial occurrence, I secured temporary housing.

Since I've left that apartment, my sleep has been restored. Unfortunately, the injuries I sustained have remained. I'm physically weaker, collapsing every day, a sensation of being neurologically sliced and burned. Migraines are more easily triggered, with nausea and heightened sensitivity to light.

Passing by a set of rooftop cell towers is painful. My ear canal intensifies with the sharp energy moving through my head. My heart races, and feels pushed in, creating a sense of suffocation. It feels like a brush of thin metal bristles pressing into my skin.

I am not alone in being injured.

~\*~

### **THE GILARDI FAMILY, PITTSFIELD MASSACHUSETTS**

The children of the Gilardi family experienced severe symptoms when exposed to RFE radiation from a cell tower that had been installed in their neighborhood, Amelia then 13 years old and her younger sister. This story shows just how vulnerable children are to radiation. Courtney Gilardi, the mother, describes the situation:

“My little one had headaches, dizziness, and felt like her head was ‘buzzy.’ She also suffered from the sensation that her skin was crawling and was itchy when she was in her room, which was on the side of the house closest to the cell tower. She complained of stomach aches and a once voracious eater and a like-clockwork sleeper could do neither. Since the tower was activated, she has lost her appetite for food and complained she couldn't fall asleep. Those were never issues in the past. She also suffered with horrible nightmares. She would toss and turn and scream out. I only realized how often she did this after we moved to the cottage [in a different town away from the cottage] and she slept peacefully through the night.”

The cottage Courtney is referring to is the unheated cottage they have rented so they can escape their home which they hope and pray they can return to, but much of that depends on a federal judge's decision. The cottage does not have hot water so Courtney and her family return to their "tower home" for a hot shower, but it is a place they can sleep through the night.

"When we would spend too much time at home, my little one would ask to leave and go to the cottage," explains Courtney, describing how they would return to the house to get clothes, take a hot shower, and be with their toys and amenities they enjoyed and never contemplated leaving until Verizon became their unwelcome neighbor. "She would say, 'I'm ready now' and we knew despite mentally wanting to stay in her own room with her toys, 'lovies', fort, books and the only home she had ever known, that physically she knew her body felt better spending time in a rundown cottage where the only thing she had was a mattress on the floor and many mice for company."

"At our home by the tower, she would lay down on the kitchen bench with her legs curled up to her stomach with red, puffy eyes, looking miserable, sleep deprived and not feeling herself. She would be so nauseous that she missed school, which led to her losing confidence as she felt she was falling behind in her studies," describes the mom of two. "Despite being one of the top students in the class, she felt like she had missed so much and felt ill so often and felt that reflected in her work, that she chose to not take the 5th grade MCAS testing."

"One day, within 10 minutes of going to school, she vomited into her face mask. It wasn't the first time it would happen. She would sleep with a bucket besides her bed and both her dad and I would take turns holding her hair back."

Amelia testified at a town meeting with her mother showing the various medications Amelia now takes, and the pan she would keep at the side of her bed when the waves of nausea were intense and sudden.

"Amelia would get dizzy. She is my ice skater and gymnast with great balance, and I would watch her walk into walls," describes Courtney. "Sometimes she would vomit in the middle of the night and I'd hear her little voice besides me in the dark by my bedside saying, 'Mama, I'm sick. I just threw up in the sink.'

"Sometimes she would get headaches. She would be dizzy."

It was Earth Day, 2021. Based on the children's classic *Alexander and the Terrible, Horrible, No Good, Very Bad Day*, Amelia Gilardi rewrote and retitled, for purposes of Earth Day, the story based on a challenge faced by her family and her community in which the environment plays a central role. "5G Earth Day Countdown: Children — Amelia's Terrible, Horrible, No Good, Very Bad Cell Tower Days" was an ode to her community and in so many ways, it spoke to a much broader audience.

*My name is Amelia and I am 13 years old.*

*A Verizon cell tower blindsided my Pittsfield, Massachusetts neighborhood and made us sick. This is my story ...*

***The really bad, worst, no good bad part –***

*We learned that we were not the only ones harmed by cell towers. We were put in touch with Noah Davidson’s family in Sacramento California. Both their girls, like us, got sick when a 5G tower was placed outside their bedroom window. No one listened to them either.*

*Mom learned about a boy, my age in Canada, also harmed by wireless radiation since he was 5 years old. They made a movie about him and others who were harmed, called Prisoners without Walls. We talked and I learned he liked the same book series. He loved playing video games. He spoke French and liked making videos.*

*We started meeting families from all over with everyday kids, like us, who had been harmed from wireless radiation either from cell towers or mobile devices. Why, if so many people were being hurt from this, was no one helping them?*

*So the truly bad, no good part is that the science is here but our legislators simply are not responding fast enough. Dr. Paul Heroux, Dr. Martha Herbert, Dr. Magda Havas, Dr. Cindy Russell, Dr. Sharon Goldberg, Theodora Scarato, Cecelia Doucette and many others have tried to educate Pittsfield about these issues. They have been silenced at meetings, and any letters from them or offers to present information or assist with an investigation have fallen on deaf ears.*

*My mom would ground me if I was told not to do something and I kept doing it over and over. I’ve heard my grandma say, “When we know better, we do better.”*

*Big people, we know better. Please, do something. We never thought this could happen to us so please, don’t wait until it happens to you.*

*I’m asking everyone who is reading this to **advocate for cell tower setbacks away from schools and homes**. I’m asking everyone to require the FCC standards that fail to protect us from biological harm to be updated. I’m asking you restore my neighborhood to the safe, residential place it was before the tower, and I am asking for each and every person to care about the wireless safety issue.*

*Our people, our pollinators and our planet depend on you.*

*Amelia*

~\*~

Department of Justice, Civil Rights Division  
28 CFR Part 35  
CRT Docket No. 144, AG Order No. 5729-2023  
RIN 1190-AA79



Notice of Proposed Rulemaking: Nondiscrimination on the Basis of Disability; Accessibility of Web Information and Services of State and Local Government Entities

September 29, 2023

To the Department of Justice:

In 2006, I was diagnosed and treated for the Environmental Illnesses of chemical and electromagnetic hypersensitivities. I was declared 100% disabled at that time. Until then, I had worked full-time for six years as a medical social worker, in Bowdle, South Dakota.

In 2016 my husband and I purchased the rural acreage where we now reside, in the High Desert.

My health improved the longer we lived here.

Then Arizona Public Service, our electricity provider, installed a smart meter on our property on May, 14, 2018.

My health did a 180 downward spiral

I now live with excruciating pain 24/7, rapid blood pressure drop, weakness, and tremors to name a few symptoms that occur daily. I am unable to live a normal life. My disability worsens as the neighbors all receive smart meters, and more cell towers, antennas, and smart phones enter our living space.

Arizona Public Services' policy is that anything that is not a residence is a "business" and will have a smart meter installed on it as part of APS' equipment enhancement/improvement program.

Due to my reactions to the electromagnetic and chemical exposures, I am unable to enter businesses, the doctor's or dentist's offices, the hospital, stores, or my church and cannot visit friends or my family.

For brief periods, I can use a modified lap-top computer, wrapped in a fabric that somewhat lessens emissions. My husband may be able to build a metal container to keep the modem in.

Going to the bank, for example, is no longer possible .because I get sick from the wifi and computers. Passing by the ATM machine in the lobby, or going into the drive-through, lowers my heart rate then I feel what my doctor describes as "ice pick" pain all over my body. In addition I lose track of what I'm doing.

I haven't been able to drive since 2018 when the smart meter was installed. Until last week, once a month my husband drove me into town so I could go to the grocery store, and that was the only time I'd ever get out of the house.

There are two grocery stores in our town. One is a huge chain store I never even tried to go into.

The other one, however, I could manage and I enjoyed it enormously. Once in a while I'd run into someone I knew at the store and if they would turn off their cell phone, we could visit.

Last week I felt terribly sick immediately walking toward then into the store. Something felt very different there.

I did what I could to shop, but by the time I reached the check-out line I was sick. I asked the check-out clerk if she was wearing a smart watch. She said no. I asked if she had a smart phone and she said yes, in her drawer. I asked her to shut it off please, which she did. I asked her what was different in the store, because I was in so much pain, becoming seriously symptomatic, and lost my balance.

She said that management had just upgraded all their computer equipment throughout the store. The self-checkout computer equipment is upgraded too, and so is the customer service desk. This monthly excursion has come to an end.

What I miss the most is that since 2018 I've been unable to go outside my house into the pasture (51 acres) for weeks at a time to brush my horse, due to the smart meters on the neighbors' houses. Now I visit her through the window.

Our smart meter was disabled when lightning struck the power pole. We strongly asked again for an analog meter to replace the smart meter but we were denied.

What was called a "non-emitting meter" was then put in place, and it caused me the same symptoms as the smart meter. It was placed on our well house, 3 football fields from our residence. Our residence, according to APS, has an "analog" meter. We do not believe this to be true as I have the same symptoms.

We had to put specialized filters on our home wiring that extends to the electric box on the pole outside. This is the only measure that has allowed me to remain in our home at present.

Chemical and Electromagnetic illness are both very disabling. Usual outcomes for recovery are very slim. It can be deadly.

My worst nightmare is yet to come, as 5-G will soon be in our area. My symptoms are worsening over time.

Sharon Casjens

Snowflake, AZ