

II. NPRM

Boston agrees with the Commission's predicate for action as articulated in the NPRM: "Devices are operating in new frequency bands, changing the way we use wireless devices, the way the supporting wireless infrastructure is deployed, and the way RF sources in general are assessed for compliance."⁴ So while the number and types of RF devices have proliferated since the Commission first developed its rules in the last millennium, Boston can only hope that any action taken pursuant to the NPRM reflects that the Commission is ready to acknowledge that its RF rules and standards have not kept pace. In the NPRM, the Commission takes notice of the increased numbers of RF devices, the many new and changing ways in which we interact with RF devices and the continuously changing environment for both. Perhaps most importantly, the Commission takes notice of how the deployments of these devices grow ever closer to humans. Boston supports the efforts of the Commission to ensure that standards keep pace with the continuously changing environment for RF emissions. We will review the record to see if Reply Comments are warranted.

III. Low Level Multiple Source Concerns and Consumers' Beliefs

Boston further files these Comments to call on the Commission to understand the concerns of residents who live in close proximity to carrier and neutral host small cell wireless facilities (SWF) as regards to the RF emissions of the sites.⁵ Boston is one of the country's most

⁴ NPRM at paragraph 119.

⁵ These suspicions are not limited to Bostonians. NATOA shared this insight with the Commission in an ex parte in ET 13-84 of March 15, 2019. ("During the meeting, we discussed the concerns expressed to local elected officials by their residents regarding the lack of updated RF emission standards, particularly with the expected proliferation of small wireless facilities being promoted by the Commission in its various small cell orders. We urged the Commission to work to publish updated standards or a clear affirmation that the existing standards have been

densely populated cities with an abundance of streetscapes with narrow sidewalks and little or no dwelling setbacks.⁶ This results in SWFs often sited within 20 feet or less of living space.

Additionally, research has revealed that there may be concerns with the possible health effects of low-level multiple source exposure arising from the huge diffusion of communication technologies such as mobile communications, wireless data transfer such as Wi-Fi, Wi-Max, Bluetooth, and ZigBee and the wireless networks to which those devices connect.⁷ Therefore, Boston requests that the Commission also examine the potential impact on health of low-level multiple exposures.

Boston believes that the concerns of the public are real and that the Commission has done a disservice to itself, local government, consumers, and even the wireless industry⁸ in failing to understand and respond to the broadly shared mistrust of the safety of RF emissions.⁹

found to be safe when applied to small wireless facilities placed in very close proximity to each other and to inhabited structures.”)

⁶ Mike Maciag, Mapping the Nation’s Most Densely Populated Cities, *Governing*, (Oct. 2, 2013, 12:00 PM), <https://www.governing.com/blogs/by-the-numbers/most-densely-populated-cities-data-map.html>.

⁷ A. Paffi et al., Scenarios Approach to the Electromagnetic Exposure: The Case Study of a Train Compartment, BIOMED RESEARCH INTERNATIONAL (2015), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4352733/>.

⁸ See, e.g., Communications Daily, *Small Cells Amplify State RF Safety Concerns; WIA, Cities Press FCC to Update Rules* (June 17, 2019) (“‘The FCC should expeditiously review and update its RF rules as needed based on sound science,’ said WIA’s Adelstein in a statement to us. ‘Relying on the best scientific data by the most qualified independent experts will allow the FCC to make well-informed decisions to ensure safety of the public, and we welcome any guidance they provide. WIA members firmly adhere to FCC guidance as they are deeply committed to ensure that wireless facilities pose absolutely no health risks to the public.’”).

⁹ Jason Law, *Franklin residents fighting town official’s plan for cell tower*, Boston 25 News (June 13, 2019, 11:18 PM), <https://www.boston25news.com/news/franklin-residents-fighting-town-official-s-plan-for-cell-tower/958040795/>; Niala Charles, *Parents Protest Cell Tower Across Street from Elementary School*, NBC San Diego (Feb. 29, 2020, 9:58 AM), <https://www.nbcsandiego.com/news/local/parents-protest-cell-tower-across-street-from-elementary-school/2275081/>; Michelle Robertson, *Milly Valley blocks faster, smarter cell phone towers over chance fears*, SF Gate (Sept. 11, 2018, 4:45 PM),

The public does not believe that the FCC’s RF exposure standards are safe nor based on science.¹⁰ They cite that the standards were first established by the Commission more than twenty-four year ago.¹¹ Standards that were established at a time when very few consumers had cell phones, let alone the mini wireless computers that the majority of consumers carry today.¹² They were established in an era of 1 and 2 G deployment, not the 5G and beyond that the nation can expect in the years to come. Early tests and reports focused either on handset emissions in proximity to a user’s head or macro cell tower deployment. None of these tests contemplated the street-level deployment we see today as a result of SWFs in the public rights-of-way. And, despite the changes in the number and type of RF devices and the proximity to individuals, the FCC simply reaffirmed its decade old standards in its December 2019 Order.¹³

A once every decade review of the standards does not, in Boston’s opinion,¹⁴ meet the Commissions obligations to evaluate the effects of our actions on the quality of the human

<https://www.sfgate.com/local/article/mill-valley-5g-antenna-tower-cell-phone-block-13221925.php>.

¹⁰ Letter from H. Anthony Lehy, et. al, EXTENET SYSTEM, INC., FCC, ET Docket No. 19-226 (filed May 5, 2020); Letter from Olga V. Naidenko, Environmental Working Group, FCC, ET DOCKET No. 19-226 (filed May 13, 2020).

¹¹ Letter from Devra Davis, President, Environmental Health Trust, to Teton County Wyoming, FCC, ET Docket No. 19-226 (filed June 8, 2020).

¹² S. O’Dea, Number of mobile (cellular) subscriptions worldwide from 1993 to 2019, Statista (Feb. 28, 2020), <https://www.statista.com/statistics/262950/global-mobile-subscriptions-since-1993/>.

¹³ NPRM at paragraph 2 (“After reviewing the extensive record submitted in response to that inquiry, we find no appropriate basis for and thus decline to propose amendments to our existing limits at this time. We take to heart the findings of the Food & Drug Administration (FDA), an expert agency regarding the health impacts of consumer products, that ‘[t]he weight of scientific evidence has not linked cell phones with any health problems.’”).

¹⁴ Boston is not alone in feeling this way. In 2012, the Governmental Accountability Office called on the Commission to reassess its testing procedures. *See* U.S. GOV’T ACCOUNTABILITY OFF., GAO-12-771, EXPOSURE AND TESTING REQUIREMENTS FOR MOBILE PHONES SHOULD BE REASSESSED, GAO-12-771 (2012).

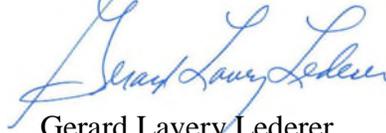
environment, including human exposure to RF energy, mandated by the National Environmental Policy Act of 1969 (NEPA).¹⁵ The City, and many of its constituents, do not believe the cursory way in which the Commission simply reaffirmed its decades old standards in 2019 was based on a robust review of the record and an updating of the science. And until the Commission appreciates the educational component of its role as the nation’s RF monitor, local governments, like Boston, will continue to be stuck in the middle as residents oppose wireless deployments for fear of the emissions, while the FCC and Congress have preempted local government review of RF standards.¹⁶

¹⁵ National Environmental Policy Act of 1969, as amended, (NEPA) 42 U.S.C. §§ 4321-4335.

¹⁶ A great frustration for Boston and its constituents is that the Commission’s authority to adopt and enforce RF exposure limits pursuant to the Communications Act and consistent with NEPA is well established. Boston and its citizens must look to the FCC to establish effective standards or look to the Congress to rewrite the Act. *See Robbins v. New Cingular Wireless LLC*, 854 F.3d 315, 319-20 (6th Cir. 2017) (“By delegating the task of setting RF-emissions levels to the FCC, Congress authorized the federal government—and not local governments—to strike the proper balance between protecting the public from RF-emissions exposure and promoting a robust telecommunications infrastructure.”).

Finally, the City is troubled that dockets 03-137¹⁷ and 13-84¹⁸ have been terminated and fears that the record built in those two proceedings will not be incorporated into the current proceeding. For that reason, Boston refiles as Exhibit A, comments that it filed with the City of Philadelphia in docket 13-84.

Respectfully submitted,



Gerard Lavery Lederer
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¹⁷ *Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields*, ET Docket No. 03-137, Notice of Proposed Rulemaking, 18 FCC Rcd 13187 (2003).

¹⁸ *Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies*, ET Docket No. 13-84, Notice of Proposed Rulemaking, 28 FCC Rcd 3498 (2013).

Exhibit A

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies)	ET Docket No. 13-84
)	
Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields)	ET Docket No. 03-137
)	

**REPLY COMMENTS OF CITIES
OF BOSTON AND PHILADELPHIA**

The Cities of Boston, Massachusetts and Philadelphia, Pennsylvania hereby reply to the comments of others in the Notice of Proposed Rulemaking (“NPRM”) and Notice of Inquiry (“NOI”) in the captioned proceeding.¹ The FCC’s last broad review of safeguards against human exposure to non-ionizing radio frequency (“RF”) radiation began 20 years ago and adopted in 1996 the regulations found at 47 C.F.R §§ 1.1307, 1.1310, 2.1091 and 2.1093. In 2003, the FCC opened Docket 03-137, ostensibly not to change the protective standards but to consider issues of compliance and enforcement.² The present combined review of standards and compliance is thus long overdue.³

A Dilemma for Local Governments

For the better part of two decades, local authorities responsible for the zoning of wireless antennas have been caught on the horns of a dilemma. On the one hand, their authority is clear over the “placement, construction, and modification of personal wireless service facilities,” subject only to certain

¹ In the same FCC document, FCC 13-39, released March 29, 2013, a Report and Order concluded, among other decisions, that the outer ear, or pinna, should be classified as an extremity akin to hands, wrists, feet and ankles for purposes of protection from radio frequency (“RF”) radiation. The Order is under a Petition for Reconsideration for which oppositions/comments are due September 11, 2013, and replies September 23, 2013, 78 Federal Register 52893, August 27, 2013.

² The decision to re-classify the pinna was, however, a substantive change for which the FCC claims to have given due notice. Order, ¶ 43.

³ “Telecommunications: Exposure and Testing Requirements for Mobile Phones Should be Reassessed.” <http://www.gao.gov/assets/600/592901.pdf>

due-process limitations arising from Congress' desire for a speedy deployment of these services – which include cellular telephony.⁴ On the other hand, the FCC's authority over radiation from personal wireless service facilities is preemptive.⁵ That is, local zoning authorities may not base their decisions about placement, construction and modification of personal wireless service facilities on concerns about RF radiation so long as those facilities comply with FCC regulations.

Differing reactions to this dilemma have been offered by the Town of Hillsborough, California, on the one hand,⁶ and Pima County and the City of Tucson on the other.⁷ For its part, Hillsborough asks the FCC to speak in “clear English, understandable to the citizens who will be affected,” on why U.S. radiation protection standards “are far higher than standards in effect in other countries;” health risks of long-term exposures; and effects on “at-risk populations” of children, the infirm and the elderly. Given the mutual interest of federal and local governments in wireless antenna collocation, the FCC should promulgate easy-to-use standards for evaluating “the cumulative impact of multiple transmitters in a single location.” Tucson, echoing Resolution 2009-188 of Pima County, calls on Congress to repeal Section 332(c)(7)(B)(iv), which precludes denial of wireless siting applications on the basis of the environmental effects of RF radiation so long as the applicant complies with federal safeguards.

Mediating the Dilemma

For this administrative proceeding, we must assume Congress will not repeal the radiation standards preemption. While the FCC is satisfied that the present regulations adequately protect humans against the thermal effects of RF radiation, many of the citizens who show up at zoning hearings on wireless placements are not.⁸ They expect reassurance from local officials. Unable to write their own standards, these officials at least must be able to demand proof of compliance with federal safeguards.

⁴ 47 U.S.C. § 332(c)(7)(A), (B) and (C); H.R. Rept. 104-458, January 31, 1996, 207-09.

⁵ 47 U.S.C. § 332(c)(7)(B)(iv).

⁶ Comments of City Manager Randy Schwartz, September 3, 2013.

⁷ Memorial adopted by Mayor and Council of Tucson August 6, 2013, citing also action by Pima County of 2009, placed on docket record 9-3-2013 by Elizabeth Kelley of Electromagnetic Safety Alliance.

⁸ Notes 6 and 7 *supra*; exchange of letters between John F. Deasy, Superintendent, Los Angeles Unified School District, and Julius Knapp, Chief, Office of Engineering and Technology, respectively May 13, 2013, and August 5, 2013.

Similarly in Boston, citizens who contact the City through its Telecomm offices, “Citizens Connect” CRM and Mayor’s Hotline, equally expect reassurance from local officials. Local officials regularly review performance testing reports from cable operators in order to identify possible radio frequency leakage, etc. Over the last decade, Boston has witnessed considerable investment, advancement and propagation of indoor and outdoor Distributed Antenna Systems (“DAS”), small cell deployment, wireless video surveillance and outdoor Wi-Fi. These new technology platforms are welcome advancements in communications benefits for consumers and quality of life for wireless device users. Frequently, the deployment of these devices necessitates public process and public grant-of-location. Local governments need – and their citizens demand – the assurance and comfort of full disclosure as it relates to the radio frequency transmission power and exposure potential and deployment and use of these devices. Unlike early cell tower deployment, today’s newer repeater network technologies are deployed in closer proximity to users. As such, potential exposure comes not from the receiving device – the phone – but rather the transmission device.

When the FCC last considered this problem, it decided not to specify how far these local demands could go.⁹ Rather, if a facilities applicant felt the required demonstration was oppressive, he could seek relief from the FCC. Conversely, a local government unhappy with an applicant’s proof of compliance could ask the Commission for help.¹⁰ The discussion at Appendix H of the Order maintains this status quo, in the hope that requests for FCC adjudication by either applicants or local zoning authorities would remain at the low level of the past 15 years. This discussion acknowledges, however, that some of the changes proposed in the NPRM – e.g., the elimination of most categorical exclusions now found at Table 1 of Section 1.1307(b) – may increase referrals to the FCC for dispute resolution. With the parties now “on the clock” for consideration of wireless facility applications,¹¹ we need a more expeditious means to resolve differences.

⁹ Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934, Report and Order, 15 FCC Rcd 22821 (2000).

¹⁰ See, generally, Order, Appendix H, # 4, Local Government Concerns.

¹¹ *City of Arlington v. FCC*, 133 S. Ct. 1863 (2013).

The administrative dispute resolution provided for at Section 1.18 of the Commission's rules may be one answer. The Commission has considerable experience with the form of mediation practiced in the Market Dispute Resolution Division of the Enforcement Bureau, and could extend the practice beyond the sections of the Communications Act to which it is most often applied.¹² The FCC also has the indirect experience of 800 MHz rebanding mediation as conducted by the Transition Administrator ("TA").¹³ The Commission's continuing preference for case-by-case adjudication over bright-line rules is commendable, but changes in the radiation density of the wireless environment and in the compliance/enforcement sections of the NPRM suggest a need for new and more expeditious dispute resolution techniques.

Uniformity Across Wireless Services

In place of the service-specific "categorical exclusions" from routine evaluation of RF radiation risks at Section 1.1307(b) of the Rules, the NPRM proposes (§§ 114-138) to standardize "exemptions" from such evaluation for single transmitters – fixed, mobile or portable – while allowing for a 1-watt blanket exemption. In general, this proposed uniformity should be easier for local governments to explain and for their constituents to understand. Given the broad support for uniform exemptions over categorical exclusions, the special pleading for, e.g., low-power metering exclusions should be refused.¹⁴

In joint Comments, Verizon and Verizon Wireless ("Verizon") appear to assume that to be successful the new standards must result in the same or greater numbers of instances where routine evaluation is avoided. (Comments, 7) But the Commission's objective of standardization on power, separation distance and frequency across all services never promises numerical equivalency of new exemptions and old categorical exclusions. Verizon misreads the Order as governing the NPRM when it cites ¶ 103 for the proposition that "any changes to exemption criteria should not affect the exempt status of existing facilities." In fact, the Order adopted no changes to exclusion criteria.

Nowhere in the discussion of the uniform criteria proposed by the NPRM is standardization synonymous with relaxation. To the contrary, the NPRM (¶ 116) refers prominently to commenters who

¹² <http://transition.fcc.gov/eb/mdrd/>.

¹³ 47 C.F.R. § 90.677(d); see also, <http://www.800ta.org/content/resources/processes.asp#mediation>.

¹⁴ Reply Comments, Utilities Telecommunications Council, November 4, 2013, 7.

expect the proposed new rules to “increase the number of new facilities requiring routine evaluation.” One such example is discussed at ¶ 114, where a relatively high-powered transmitter today could be excluded, even if less than 10 meters above ground, because it did not exceed the maximum ERP of 1000 watts. The proposed standards recognize that unguided radiation is spherical and its effects cannot be evaluated by vertical separation distances alone.

Where multiple-transmitter sites are concerned, Verizon asks (8-9) to use any of four recited methods “in determining the contributions of each transmitter.” In the interests of simplicity and consistency, it would seem that all wireless providers at the site should agree upon a single method to use in that place, lest the differing methods produce skewed percentages. In some other site, a different method might be the consensus choice of the providers, but they should still agree upon that method.

Greater Transparency in Consumer Information

At ¶234, the NOI asks “whether the Commission should consistently require either disclosure of the maximum SAR value or other more reliable exposure data in a standard format, perhaps in manuals, at point-of-sale, or on a website.” San Francisco’s effort in this regard was blocked by the wireless industry’s principal trade association, CTIA.¹⁵ Not surprisingly, CTIA’s answer in this proceeding is negative again. The trade association professes concern that additional disclosure – or easing access to available data – risks misleading consumers that phones or other wireless devices are unsafe.¹⁶ If that were the case, there would be no need for the disclosures on the labels of approved drugs.

In their Reply Comments (11), the City and County of San Francisco contend that the FCC would be justified in mandating warnings or compliance labels “as long as they convey truthful information in an unbiased format.”¹⁷ The FCC should adopt its proposal and publicize the information through manuals, point-of-sale and web site information.

¹⁵ See, e.g. <http://www.nfib.com/press-media/press-media-item?cmsid=60968>.

¹⁶ Comments, September 3, 2013, 34-46.

¹⁷ Citing *Zauderer v. Office of Disciplinary Counsel*, 471 U.S. 626, 651 (1986).

CTIA also attacks the “precautionary principle” by which, in areas of scientific uncertainty, margins of safety are extended in case prevalent notions of sufficient protection are later proven wrong.¹⁸ The trade association’s essential response is: “Trust us, the existing safeguards are more than adequate.” Some of the papers and comments on this record contradict such easy optimism.¹⁹ At least one court has approved a local government’s act of prudent avoidance of potential RF radiation hazard by alternative siting that did not significantly burden the industry applicant.²⁰ We believe that judicial outcome should be acknowledged in the new rules.

Added Protection for Transients

At section IV.D of the NPRM (“Mitigation”), the FCC proposes that individuals “transiting” a potential radiation danger zone must not be exposed beyond “general population” limits which are lower than “occupational” maxima for trained workers. The NPRM also discusses warning signs and physical barriers as means of protection. The extra protection for transients is warranted.²¹ The warning signs and barriers should be considered minima that local authorities can exceed if necessary.

Verizon appears to recommend less monitoring, by urging “safe harbors” (10-15) at wireless sites that are physically difficult to access or where a provider cannot control the behavior of third parties. This would seem to invite any number of easy excuses for RF radiation risks to untrained or unaware persons. The better solution, we believe, is give providers every incentive to inform third parties of these risks and enlist their help in protection. In the end, not all over-exposure can be prevented, but the facts of any given case should determine whether the provider or the interloper or some third party is to blame.

¹⁸ “The Precautionary Principle and EMF,” .

http://www.who.int/pehemf/meetings/southkorea/Leeka_Kheifets_principle_.pdf Taking action on the principle is sometimes described as “prudent avoidance.”

¹⁹ E.g., Comments of Cindy Sage and David Carpenter, summarizing Bio-Initiative of 2012, attached to multiple other comments; EMR Policy Institute; Blake Levitt and Henry Lai; Reply of Joel M. Moskowitz dated 11-5-13.

²⁰ New York SMSA Limited Partnership v. Town of Clarkstown, 99 F. Supp. 2d 381, 392 (SDNY, 2000)

²¹ Comments of International Brotherhood of Electrical Workers.

Help from Expert Agencies

At ¶ 210 of the NOI, the FCC appeals for the help of other knowledgeable agencies such as EPA, FDA and NIOSH. Local government commenters with connections to these and other federal specialist agencies should echo the appeal and directly solicit their aid. The FCC admits its own lack of expertise in the field. (Order, ¶ 6) But the overlap of federal agency responsibilities for RF radiation protection and the merely advisory status of the Radiofrequency Interagency Work Group often leaves leadership unclear and encourages a pass-the-buck attitude.²² We regret that no other federal agencies have seen fit to participate in the comment round, and we look forward to hearing from them on reply.

The 1999-2000 judicial challenge to the FCC's 1996 rules²³ never reached the issue of "electrosensitivity" as a cognizable disability under the Americans with Disabilities Act. ("ADA") Here again, an agency responsible for ADA implementation acknowledges that the impairment may be disabling but has promised merely further inquiry. After more than a decade, that investigation remains unopened.²⁴ The dockets here have been updated with massive additional evidence of the crippling effects of RF radiation on an admitted minority – but a suffering minority – of U.S. citizens.²⁵ The FCC

²² <http://www.fda.gov/radiation-emittingproducts/radiationemittingproductsandprocedures/homebusinessandentertainment/cellphones/>

²³ *Cellular Phone Taskforce v. FCC*, 205 F.3d 82 (USCA-2, 2000).

²⁴ 67 Federal Register 56352, 56353, Architectural and Transportation Barriers Compliance Board, September 3, 2002.

²⁵ See, e.g. declarations attached to the Comments of EMF Safety Network.

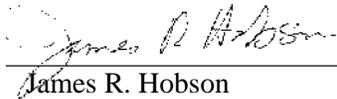
and its sister regulatory agencies share responsibility for adherence to the ADA and should replace promises with serious attention to a serious medical problem. This is one area where the FCC could lead in advice to electrosensitive persons about prudent avoidance.

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