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Regarding: Request for Information on Electromagnetic Fields (EMFs),
Radiofrequency (RF) Radiation, and Wireless Radiation Exposure

[Question 2: Perspective]

I am submitting this comment as an individual consumer and former resident who experienced chronic, close-range exposure to wireless infrastructure elements on a residential building.

[Question 3: Public Experiences and Exposure Patterns]

- Source of Exposure: Cellular tower infrastructure and associated antenna mast hardware located on a residential structure.
- Proximity and Duration: The exposure occurred at ultra-close range—less than 25 feet from the primary living space—subjecting occupants to continuous, 24/7 background exposure over the duration of the residency. I am no longer subjected to this close-range exposure, but the experience highlights severe gaps in public protections.

[Question 5 & 6: Exposure Standards and Risk Assessment]

I urge federal health agencies to critically re-evaluate the FCC's General Population/Uncontrolled Exposure framework (47 CFR § 1.1310). The current standards suffer from systemic deficiencies that fail to protect everyday citizens:

1. Outdated Scientific Baseline (1996): The current Maximum Permissible Exposure (MPE) limits rely on guidelines adopted in 1996. These standards are inherently outdated as they were built around a mobile landscape that did not anticipate the density of modern 5G/6G architecture, continuous multi-frequency exposure, or the placement of masts directly on multi-family residential rooftops.
2. The Thermal Precedent Flaw: The 1996 FCC framework protects only against acute thermal tissue heating over short intervals. It entirely fails to account for the biological realities of chronic, long-term, non-thermal cumulative exposure faced by residents living 24/7 within 25 feet of infrastructure.
3. Proximity Gaps in Local Oversight: Under the Telecommunications Act of 1996, local municipalities are preempted from restricting cell placements based on environmental health concerns if they meet FCC limits. This leaves residents completely vulnerable, with no legal recourse or mandatory safety buffers to prevent high-density arrays from being built right next to bedrooms or living rooms.

[Question 7 & 8: Certified Consumer Verification Equipment & Real-World Exposure Methodologies]

- Lucid Testing Certifications: Currently, average consumers are left in the dark, forced to buy uncalibrated, uncertified third-party EMF meters to guess their personal exposure levels. The federal government (via NIST or an authorized UL-style certification framework) should establish a formal certification path for consumer-grade RF measurement equipment.
- Democratized Compliance Auditing: By creating an accessible tier of certified, reliable handheld meters, everyday residents can independently audit and verify whether a building mast is operating within its legally disclosed transmission intensities. This shifts the

burden of proof off vulnerable populations and crowdsources real-world, transparent public health surveillance data.

- 3D Volumetric Spatial Auditing: Federal health and safety agencies should establish a standardized protocol for 3D volumetric exposure mapping inside residential spaces. Rather than relying on single, static center-of-the-room data points, testing frameworks must utilize an extended pole assembly equipped with a calibrated tri-axial probe to systematically capture and plot electromagnetic energy metrics within every individual cubic meter of a living space.
- Localized Constructive Interference Mapping: This multi-dimensional tracking is vital to mathematically identify and isolate structural "exposure hot spots." These spikes often form silently when incoming RF signals reflect off internal building materials, focusing intense non-thermal energy into specific domestic zones—such as where beds, cribs, or desks are positioned.
- Standardized Energy Inflow Auditing: To scientifically determine if external fields are actively causing harm, the federal government must establish a standardized protocol for measuring the exact RF energy density and electric field strength entering a private residential unit. These assessments must utilize calibrated, tri-axial isotropic antennas to map cumulative exposure across all walls and windows closest to the mast. Once the inflow energy is verifiably quantified, the data must be cross-referenced against independent, non-thermal biomedical models to evaluate its precise biophysical toll on human cardiac tissue and autonomic nervous system regulation.

[Question 8 & 9: Technical Information and Dynamic Environmental Disclosures]

- The "Energy Star" Clarity Model: Federal health agencies and code regulators should establish a standardized, consumer-facing labeling framework for active wireless infrastructure—analogue to the EPA's Energy Star metrics for device energy efficiency.
- Active Field Registry Labels: Every residential rooftop cell site mast should be legally required to feature an accessible, highly visible public registry placard (and corresponding digital QR database link). This label must clearly disclose the mast's maximum transmission intensity, active operating frequencies (e.g., specific sub-6 GHz or millimeter-wave 5G bands), and its licensed directional beamforming pathways.
- Mandatory Field Audits: Federal health agencies should mandate that telecom providers perform physical, localized RF field mapping inside residential units located within close proximity (e.g., <50 feet) of rooftop masts, rather than relying strictly on computer-generated safety simulations.
- Mandatory Weather-Variant Power Disclosures: Federal regulations must mandate the explicit public disclosure of how wireless infrastructure alters its transmission intensity under varying environmental conditions.
- Rain Fade and ATPC Accounting: Providers must be forced to openly declare the maximum operational ceilings of their Automatic Transmit Power Control (ATPC) systems. Local residents have a right to know exactly how much transmission power is automatically escalated during rain, snow, or fog to compensate for atmospheric attenuation, as these

dynamic power surges can dramatically increase localized exposure metrics compared to baseline clear-weather compliance models.

- Mandatory 2-Year Historical Power Logs: The proposed public disclosure and labeling infrastructure must include a legal requirement for telecom operators to maintain and provide accessible, historical transmission data. Residents must have the right to request and immediately pull a minimum of a two-year rolling log detailing the exact power variations, transmission intensity fluctuations, and active frequency bands used by any given mast on or adjacent to their building.
- Retrospective Exposure Auditing: Access to long-term power registries is crucial for retrospective health auditing. It allows residents, epidemiologists, and medical professionals to accurately map historical health changes or cardiac anomalies against real, long-term emission trends rather than relying entirely on a single day's clear-weather baseline testing.

[Question 10(d) & 12: Longitudinal Cohort Studies and Low-Level Evidence]

- Longitudinal Cardiac Tracking Required: Federal health agencies must fund and initiate long-term, longitudinal cohort studies specifically focusing on cardiovascular health outcomes for populations residing within ultra-close range (<50 feet) of high-power wireless infrastructure.
- The Pacemaker Precedent: This request is informed by direct community observation: another resident in my immediate living environment required the surgical implantation of a cardiac pacemaker during their residency near this specific transmitter array. Federal tracking metrics must investigate if chronic, continuous residential exposure at close range acts as an environmental stressor or accelerant for underlying cardiac electrical dysfunction, even at exposure levels currently deemed compliant with 1996 FCC safety limits.

[Question 11(d): Exposure Risk Assessments for Sensitive Populations]

- Implanted Medical Device Interoperability: Current risk evaluation frameworks fundamentally neglect the real-world spatial density of 5G antennas on residential roofs. The government must modernize safety buffer zones around multi-family residential structures to specifically protect individuals with implanted medical devices (such as pacemakers and defibrillators), ensuring that localized structural EM fields do not cause subtle, unmonitored electromagnetic interference (EMI) over prolonged periods.

[Question 17: Federal Research Priorities and Inter-Agency Coordination]

- Inter-Agency Environmental and Cardiac Cross-Referencing: I urge the Department of Health and Human Services to establish a collaborative, data-sharing research pipeline between the FDA, CDC, and the FCC to investigate the real-time health impacts of dynamic infrastructure power scaling.
- Correlating ATPC Surges with Health Data: Specifically, federal health agencies should cross-reference localized, time-stamped weather data and documented Automatic Transmit Power Control (ATPC) transmission surges (such as during heavy rain or snow) with localized, anonymous emergency department admissions or remote pacemaker telemetry logs.

- Investigating Acute Exposure Spikes: This targeted research is necessary to determine if sudden, weather-induced spikes in localized RF transmission intensity correlate with acute cardiovascular events, electrical anomalies in implanted cardiac devices, or sudden spikes in cardiac arrhythmias among residents living in ultra-close proximity to rooftop masts.