

Concerns Regarding Residential Exposure to Small-Cell 5G Installations

The recent installation of a small-cell 5G antenna approximately 20 feet from my home has raised concerns about the potential long-term effects of continuous radiofrequency (RF) exposure in residential neighborhoods. Since its installation, I have documented a substantial increase in RF readings, with my measuring device registering spikes exceeding 6,000. Although these readings require verification by a qualified professional and cannot be interpreted without identifying the measurement units and testing conditions, the difference from measurements taken before installation is concerning.

My primary concern is the involuntary and continuous exposure that may occur inside my home, particularly in my child's bedroom. Residential small-cell installations are increasingly being placed close to homes, schools, and other locations where people may spend significant amounts of time. I believe the potential effects of these installations should be studied specifically in real-world residential settings, rather than relying only on general research involving larger cellular towers or controlled laboratory conditions.

Existing research has identified gaps in knowledge regarding long-term RF exposure, newer 5G frequencies, children, and other potentially vulnerable populations. However, additional research is needed to examine the cumulative and long-term effects of small-cell antennas located near residences. Such research should evaluate actual exposure levels inside homes, differences between indoor and outdoor exposure, exposure patterns over time, and whether current testing and compliance procedures adequately reflect the conditions experienced by nearby residents.

I am not opposed to technological advancement or improved wireless connectivity. However, public health, transparency, and responsible infrastructure planning should remain priorities. Residents deserve clear information about the placement, operation, exposure levels, and regulatory compliance of small-cell installations near their homes.

I respectfully request that relevant federal agencies support and prioritize independent, long-term research on small-cell 5G installations in residential areas. This research should include exposure assessments in nearby homes, consideration of children and other potentially vulnerable populations, evaluation of newer frequencies and technologies, and review of whether existing safety standards and monitoring procedures adequately address these installations. I also request that agencies make compliance records, exposure assessments, and research findings accessible to the public.

Scientific References

- National Research Council. (2008). Identification of Research Needs Relating to Potential Biological or Adverse Health Effects of Wireless Communication Devices.
- World Health Organization. (2020). Radiation: 5G Mobile Networks and Health.
- International Commission on Non-Ionizing Radiation Protection. (2020). Guidelines for Limiting Exposure to Electromagnetic Fields. Health Physics, 118(5), 483–524.