

Reasons to stop 4G/5G wireless technology:

The FCC ignores safety & local control for “small cell” & other wireless technology.

What is 5G? 5G includes:

1. Tens of thousands of 5G wireless satellite launches
2. Tracking, powerful, **laser-beam focused "phased array" antennas**
3. Connections to all objects for **the Internet of Things** & surveillance
4. [Football-sized wireless drones](#) for the Hawaii sky (i)
5. **Electronic warfare**, including [training on US land](#) despite [local](#) and [state opposition](#)
6. New wireless frequencies, including millimeter waves (circa 30-80 GHz)
7. Millions of "small cell" towers

What are small cell towers?

1. "Small cells" are **powerful Distributed Antenna Systems, with antennas:**
 - To 6 cubic feet [with equipment](#) to 28 cubic feet that may have noisy fans and power equipment [on pole and/or ground](#)
 - **Set <1/3 mile apart** or 100 feet in line of sight
 - Set on utility poles, lampposts, street furniture, wires, etc.
 - **Placed by homes**, plus or minus 10 feet, with overlapping installations
 - **Can be enlarged without permit** to 10% or 30 feet (ii)
 - When one exists, refusing more on the same structure is hard.
 - **Municipalities may regulate and assert zoning rights**, but [ordinances](#) must be in place first and are *not* retroactive.

Wireless & 5G Health Warnings

1. In 2011 wireless or "radiofrequency" was classed as a [class 2B “possible human carcinogen”](#) by 30 independent eminent, independent experts in the field for the **WHO International Agency for Cancer (IARC)**.
2. Studies since have confirmed **brain, reproductive, cardiac, & glucose disruption, birth defects**, etc.

3. IARC **original experts ask for stronger reclassification or caution** (Miller, [Hardell](#), [Lesczynski](#), [Portier](#), Samet, Belyaev, [Miller](#), etc.) and in 2019 a **new IARC advisory group requested reevaluation** (iii)
4. Concerned, **experts recommend a halt for health** (iv v vi)
5. **Insurance companies refuse to insure** 5G & or any other wireless exposure - telecommunications companies warn of **liability**. (vii)
6. Wireless and especially 5G threaten pollinators, wildlife, and food production.

Incredible Range of Wireless Opposition

1. *The FCC's questionable diplomacy and expertise has raised the ire of NASA, the NOAA, **utilities**, security experts, **astronomers**, the **Department of Defense**, **aviation and aerospace industries**, etc., who **warn of 5G interference with critical communications**, **weather forecasting**, **GPS**, critical astronomy, transport, and **cybersecurity**.*
2. **Opposition to small cells ranges wide:** Utilities Technology Council [doubts consumer benefits]; US Conference of Mayors; **Natural Resources Defense Council** [court win over dropped environmental and historic review]; **2 dozen+ cities suing FCC since 2019** [public safety, visuals, and fair rent], National Association of Counties, National Conference of State Legislatures, etc.
3. **Admits ill health or sensitivity from wireless:** [European Parliament](#), U.S. Access Board, American Academy of Environmental Medicine, [Boston](#), [Canadian Human Rights Commission](#), [U.S. Job Accommodations Network](#), etc.
4. **State- or country-led 5G investigations** in Vermont, Oregon, New Hampshire, Switzerland, France, etc.
5. **Bans in Mar-A-Lago**, Palm Beach [Trump's Resort], Californian coastal communities, **Easton (CT)**, overseas in Brussels, Swiss states, etc. - a Hawaii county resolution to halt 5G; temporary bans in Sandy Springs, GA and Keene, NH; and **ordinance restrictions** from Mill Valley, CA, to Burlington, MA. (viii)

Lack of Safety Review or Monitoring

1. The FCC **fails to monitor facilities** to insure compliance with (lax) FCC guidelines, require public contact information, and **independent consultants are rare**.
2. 5G measurements are **miss peak exposures** by a wide margin (see p.11).
3. At 11 feet from a small cell tower, **small cells exceed FCC limits - like cell phones do** in close contact (xi)
4. After 6+ years, the FCC closed a docket about wireless exposures and chose to ignore the concerns of the **American Academy of Pediatrics** and **EPA** other noteworthy organizations and experts, many providing evidence of a need for **reassessment of testing, actual exposures, and alignment with current science**, opening the door to a current **lawsuit**. (x)

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5. The FCC **prevents safety review** by “batching” multiple applications as one application under a 60- or 90-day shot clock – one reason for city suits.
6. The FCC continues to enact rules **exempting from permit controls or review** many facilities and additions - triggering [new lawsuits](#).

Small Cells & 5G Have Significant Costs with Little Gain

1. **Service problems are often due to monopoly and lack of investment** in technology and maintenance of infrastructure - as in [New Jersey](#), [New York](#), [Pennsylvania](#), [Minnesota](#) - to avoid [expense](#) & [push costly wireless](#).
2. The intense [heat from circuitry](#) for 5G is expected to **reduce the life of any nearby equipment**, including 5G equipment.
3. Macro or large cell towers provide adequately for wireless communications - only 1 to 10 milliwatts per square meter (mW/m²) is needed for cell phones, but small cells provide millions of mW/m².
4. 911 or emergency calls can be [prioritized](#).
5. **79% or more of buyers refuse to buy** next to cellular infrastructure. (ix)
6. Extreme FCC limits on fees, despite wear and tear of town- or city-owned property, [2 billion subsidy](#) for [dangerously hackable](#) 5G.
7. Workers and residents near small cells face risks of high exposures, fires, electrical shock, falling equipment, and explosions or toxin leaks from nickel-cadmium batteries (xii)
8. Small cells are an access barrier for electromagnetic sensitivity, a disability recognized internationally and by federal agencies (xiii xiv xv xvi)

Small Cells are Energy-Intensive

1. Wireless is ten times more energy intensive than wired infrastructure.
2. 5G may be 60+ times more energy intensive than wired infrastructure.
3. Small cells & 5G signal blockage mean axing street trees.
4. Wireless investment derails investment in secure fiber & copper maintenance.

REFERENCES

i No 4G/5G drones in Maui skies! Updated January 28, 2020. Available at <https://keepyourpower.org/drone/>

ii See FCC docket 19-250 and comments filed by cities such as Boston, San Diego, etc.

iii Concerned scientists from the 2011 IARC committee include L. Hardell, A. Miller, D. Leszczynski, C. Portier, & I. Belyaev; a 2017 Hardell publication describes the politics: World Health Organization, radiofrequency radiation and health - a hard nut to crack

iv The 5G Appeal: Scientists and doctors warn of potential serious health effects of 5G. <http://www.5gappeal.eu>

For updated version, links, and legislation, see LastTreeLaws.com

- v International Appeal: Stop 5G on Earth and in Space. <https://www.5gspaceappeal.org/the-appeal/>
- vi International EMF Scientist Appeal. <https://www.emfscientist.org/>
- vii Electromagnetic Field Insurance Policy Exclusions are the Standard. Environmental Health Trust. Available 2020 July 28 at <https://ehtrust.org/key-issues/electromagnetic-field-insurance-policyexclusions/>
- viii International Actions to Halt and Delay 5G (2019 Apr 13) Environmental Health Trust. <https://ehtrust.org/international-actions-to-halt-and-delay-5g/>
- ix Cell Towers, Antennas Problematic for Buyers. (2014, Jul 25) Realtor Magazine.
- x The Environmental Health Trust, supported by the National Resources Defense Council, and the Children's Health Defense are in the U.S. Court of Appeals for the District of Columbia to review and reject as unlawful the Federal Communications Commission's Resolution of Notice of Inquiry, Second Report and Order, Notice of Proposed Rulemaking, and Memorandum Opinion and Order, ET Docket Nos. 03-137, 13-84, and 19-226, FCC 19-126, released on December 4, 2019.
- xi Afflerbach, A., CTC Technology & Energy. (2017 Nov 10). Comparison of RF exposure and distance from a small cell site. Study contracted for Montgomery County, Maryland. Columbia Telecommunications Corporation.
- xii Senator Blumenthal Press Release. (2015, Sept 17). Senator Blumenthal, Representative Eshoo Urge FCC to Enforce Exposure Limits for Those Who Work Near Wireless Towers.
- xiii Accommodations for People with Electromagnetic Sensitivity. JAN Job Accommodations Network. US Department of Labor's Office of Employment and Disability.
- xiv IEQ Indoor Environmental Quality Project. US Access Board. <http://www.access-board.gov/guidelines>
- xv Editors Kjell Hansson Mild Mike Repacholi Emilie van Deventer Paolo Ravazzani. (2004, Oct 25-27). Proceedings International Workshop on EMF Hypersensitivity. Prague, Czech Republic. http://www.who.int/peh-emf/publications/reports/EHS_Proceedings_June2006.pdf
- xvi Johansson, O (2006). Electrohypersensitivity: State-of-the-Art of a Functional Impairment. *Electromagnetic Biology and Medicine*. 24:245-258