

4G/5G Wireless Infrastructure Risks: “Small” Cell Towers

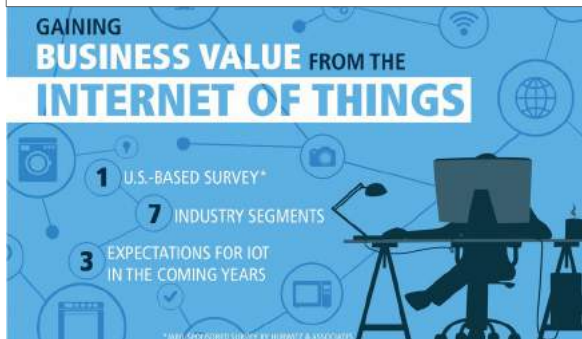
The FCC has proposed rules to “streamline” & take away local control of “small” cells.



What are small 4/5G small cell towers?

- **Multiple** antennas +/- 10 feet from homes
- Set on utility poles, lampposts, wires, etc.
- Antennas to 6 cubic feet
- Equipment to 28 cubic feet
- May have noisy fans, power equipment
- Set <1/3 mile apart or 100 feet in line of sight

5G increases the power of AI, surveillance, independent robots, streaming video, IoT.



Opposed to “Small” Cells: Utilities Technology Council [*Doubts consumer benefits*]; American Academy of Environmental Medicine; US Conference of Mayors; Natural Resources Defense Council [*Partial court win over dropped environmental and historic review*]; **ETC.** **International 5G Bans:** Brussels, Swiss states, Florence, etc. **US “Small” Cell Bans:** Mar-A-Lago, Palm Beach [*Trump’s Resort*]

Wireless & 5G Health Warnings:

- In 2011 30 scientists of the WHO International Agency for Cancer (IARC) classed wireless as a Group 2B “possible” carcinogen.
- Studies since have led the WHO to begin *multiple reviews in 2019 of reproductive, cognitive, and other effects, & reconsider 2B classification.*
- Concerned adding 5G adds fuel to the fire, **scientists recommend a moratorium & wireless roll back** [*See 5Gappeal.eu; 5Gspaceappeal.org; EMFscientist.org*]

Cancer quadruples near a cell tower (Wolf et al 2004) & nausea, fatigue, irritation, headaches, etc., increase (Santini et al 2003)



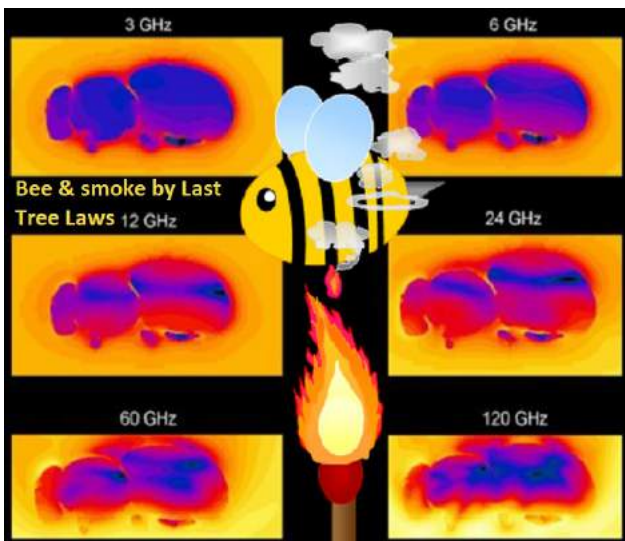
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Small Cells are Energy-Intensive & Costly

- Wireless uses more energy than hard-wired infrastructure, but 5G towers are worst.
- 5G small cell towers are said to use 69 times more energy than wired infrastructure!
- Many more small cells are needed for 5G



5G millimeter waves heat bees & insects via resonance & dielectric heating (Thielens et al, 2018)

Wireless & Small Cells Risk Health and the Environment

- Wireless was never tested for human safety by the EPA, FDA, etc.
- Studies show wireless confuses navigation of birds and bees
- Studies show wireless increases cancer and other health risks
- 5G millimeter frequencies use phased arrays that concentrate power (3.5 GHz- 80 GHz)
- Diesel or nickel cadmium batteries for 8-hour generators are a fire, explosion & toxic hazard
- Small cell towers and 5G signal blockage mean axing street trees

Wireless is Less Secure & Less Safe

- Wireless investment derails secure fiber to home and maintenance of copper phone lines, which work best during power outages.
- FCC fails to insure validity of or compliance with FCC guidelines
- Small cells can exceed FCC guidelines, but there are few qualified inspectors and equipment, especially at 5G frequencies
- FEDERAL LAW denies citizens and towns the right to say no! Industry places cell towers and other equipment with impunity near homes.

For change, STATES, representatives and residents must work together to change or fight federal law.

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