

In the Matters of:

**Accelerating Wireless Broadband Deployment by) WT Docket No. 17-79
Removing Barriers to Infrastructure Investment)**

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**Revising the Historic Preservation Review Process) WT Docket No. 15-180
for Wireless Facility Deployments)**

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**Accelerating Wireline Broadband Deployment by) WC Docket No. 17-84
Removing Barriers to Infrastructure Investment)**

To: Office of the Secretary
Federal Communications Commission
Washington, DC 20554

July 14 2017

Dear FCC Commissioners,

Contrary to industry assertions, there is sufficient research showing adverse environmental and human health effects of radiation from wireless technology at levels far below the current FCC RF limits to justify the FCC placing a moratorium on the rollout of 5G. A moratorium should also be placed on installation of additional antennas and a warning should be issued to users of wireless technology that they should take precautionary action to minimize their exposure to wireless radiation while new guidelines are established. An initial approach for establishing new guidelines is described in "Scientific evidence contradicts findings and assumptions of Canadian Safety Panel 6: microwaves act through voltage-gated calcium channel activation to induce biological impacts at non-thermal levels, supporting a paradigm shift for microwave/lower frequency electromagnetic field action" (<https://www.ncbi.nlm.nih.gov/pubmed/25879308>).

It is crucial that wired infrastructure, especially the copper phone line system, be maintained so individuals have a safe method of communication. No one should be forced to expose themselves and those around them to a carcinogen so that they can communicate.

A moratorium is supported by the fact that the U.S. National Toxicology Program (NTP) released results last year showing that **exposure to non-thermal levels of RF radiation emitted by wireless technology causes cancer and DNA breakage**. Furthermore, a **replicated European toxicology study showed that RF radiation promotes cancer growth** (<http://ehtrust.org/science/facts-national-toxicology-program-cellphone-rat-cancer-study/>).

Two other federal agencies have stated that the FCC limits for RF radiation emitted by wireless technology do not protect us from biological harm during the chronic exposures we are experiencing today.

- The Department of Interior stated **"the electromagnetic radiation standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today."**(http://www.ntia.doc.gov/files/ntia/us_doi_comments.pdf)
- The Environmental Protection Agency stated "The FCC's current exposure guidelines, as well as those of the Institute of Electrical and Electronics Engineers (IEEE) and the International Commission on Non-ionizing Radiation Protection, **are thermally based**,

and do not apply to chronic, nonthermal exposure situations. They are believed to protect against injury that may be caused by acute exposures that result in tissue heating or electric shock and burn. The hazard level (for frequencies generally at or greater than 3 MHz) is based on a specific absorption dose-rate, SAR, associated with an effect that results from an increase in body temperature. The FCC's exposure guideline **is considered protective of effects arising from a thermal mechanism but not from all possible mechanisms.** Therefore, the generalization by many that the guidelines protect human beings from harm by any or all mechanisms is not justified." (emphasis added) (http://www.emrpolicy.org/litigation/case_law/docs/noi_epa_response.pdf). As the EPA makes plain, the FCC RF radiation limits are not protective from all adverse effects only those from thermal mechanisms during acute exposures. FCC RF radiation limits are based on thermal effects in a large male. They are not population-protective. They do not and were never intended to protect from biological effects or even thermal effects during the chronic exposures we all experience today.

The industry assertion that there is no known mechanism by which wireless radiation can cause biological effects at levels below FCC RF limits is false. "Wireless Communication Technologies: New study findings confirm risks of non-ionizing radiation" (<http://bit.ly/2qX22CY>) outlines mechanisms by which radiation from wireless technology can cause cancer and other biological effects that do not involve heating.

FCC must complete a NEPA review and EIS prior to implementing 5G

The potential environmental and human health hazards from 5G necessitates a comprehensive NEPA review [*Envtl. Def. Fund v. Tenn. Valley Auth.*, 468 F.2d 1164, 1174 (6th Cir. 1972)] and, specifically, a formal Environmental Impact Statement (EIS). The EIS should include a full review of environmental effects, as well as human health and safety. The FCC has an obligation to evaluate whether "*services or capabilities are essential to public health, safety, or in the public interest*" (H.R. Report No. 104-204, p. 94) and so must protect the public from possible harm caused by radiofrequency radiation.

The FCC is not entitled to essentially disregard comments that do not provide global cost-benefit analysis (*Scenic Hudson v. Federal Power Commission*). The Commission has an affirmative duty to inquire into and consider all relevant facts. The FCC must use government resources to perform the relevant analysis. The FCC should request the EPA use its National Risk Management Research Laboratory resources and experts to conduct all cost analyses necessary.

This proposal also triggers the need for a Memoranda of Understanding (MOU) with U.S. Fish and Wildlife Service under Executive Order 13186 concerning effects on migratory birds.

The attached research papers provide evidence which supports the need to close this docket, preserve the copper line phone system, place a moratorium on 5G and new antenna installations, issue a precautionary warning to users of wireless technology, and request Congress to fund the EPA to set biologically-based population-protective RF safety limits.

Sincerely, 

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