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To: Federal, State, and Local Governments, and Communities

From: Ronald M. Powell (retired U.S. Government scientist; Ph.D., Applied Physics, Harvard University)¹

Subject: **Please OPPOSE the expansion of cellular technology, especially 5G, on health grounds.**

The international biomedical research community is increasingly linking radiofrequency radiation from wireless devices to adverse health effects. Among the devices of concern are cell towers and cell phones. Most recently, in 2016, the National Toxicology Program at the National Institutes of Health linked cellular radiofrequency radiation to malignant brain tumors (gliomas) and malignant nerve tumors (schwannomas) of the heart in rats.^{2,3}

This growing understanding of the adverse health effects of cellular radiation means that the expansion of cellular technology should be HALTED. However, the proponents of expansion, including the Federal Communications Commission, see billions of dollars of profits at stake for the wireless industries. They are pressing for ACCELERATED IMPLEMENTATION of cellular technology, especially the new Fifth Generation (5G) of cellular technology,⁴ and with no further testing for health consequences. 5G will employ higher frequencies to enable faster data rates. These frequencies are useful for short distances only, so 5G cell towers must be closely spaced. They will be placed up and down residential and business streets, spaced several houses or businesses apart, and will beam radiofrequency radiation directly into every occupant. Such placement threatens health, aesthetics, and property values. Little wonder that 5G is viewed as outrageous by so much of the public.⁵

The consequence of accelerated implementation is a rapid increase in the MANDATORY IRRADIATION OF THE PUBLIC, including children and adults. The proponents claim that the public is demanding such implementation. But the opponents see accelerated implementation as a last desperate effort by the proponents to profit from cellular technology before growing public awareness of the health consequences makes that impossible.

The principal method used by the proponents to accelerate implementation is to urge each level of government to pass legislation that bars the lower levels from preventing installation in order to protect their residents. This is a major assault on LOCAL RULE through cascading levels of governmental overreach. The goal of the proponents is to assure that no governmental or community entity, and no individual or business, can prevent the placement of a cell tower in front of any home or any business, including YOURS.

The expansion of harmful cellular services is all the more tragic because SAFE COMMUNICATIONS ALTERNATIVES EXIST. They employ wired technologies, such as coaxial cable, shielded Ethernet cable, and optical fiber cable. Coaxial cable and shielded Ethernet cable guard against the emission of radiofrequency radiation. And optical fiber cable does not produce radiofrequency radiation in the first place. It is true that wired technologies do not support device mobility, and can be more expensive to install than wireless technologies. But wired technologies are much safer, more cyber secure, more reliable, and faster than wireless technologies. What do YOU prefer as your link to communications services: a thin, benign optical fiber cable running from the street to your home or business, and easily placed underground, OR a cell tower looming in front of your home or business?

¹ I am a retired U.S. Government career scientist (Ph.D., Applied Physics, Harvard University, 1975). During my Government career, I worked for the Executive Office of the President of the United States, the National Science Foundation, and the National Institute of Standards and Technology. For those organizations, respectively, I addressed Federal research and development program evaluation, energy policy research, and measurement development in support of the electronics and electrical-equipment industries and the biomedical research community. I currently interact with other scientists and with physicians around the world on the impact of electromagnetic fields, including radiofrequency radiation, on human health. Contact: Ronald M. Powell, Ph.D., 20316 Highland Hall Drive, Montgomery Village, MD 20886-4007. Email: ronpowell@verizon.net.

² The National Toxicology Program tested rats, not humans, because humans cannot ethically be subjected to such risks. Also, test on rats have proven useful in predicting human responses.

³ Ronald M. Powell, Ph.D., The Health Argument against Cell Phones and Cell Towers (<https://www.scribd.com/document/320935636/>).

⁴ What are 5G and the Internet of Things (<http://whatis5g.info/>).

⁵ Ronald M. Powell, Ph.D., Why We Should Oppose 5G on Health Grounds (<https://www.scribd.com/document/339826676/>).