

# Congress of the United States

Washington, DC 20510

December 3, 2018

The Honorable Brendan Carr  
Commissioner  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Dear Commissioner Carr:

We write with interest regarding your recent remarks on the safety of 5G technologies during a Senate Commerce Committee field hearing in Sioux Falls, South Dakota.

During this hearing, the Mayor of Sioux Falls, the Honorable Paul TenHaken, asked about “the health ramifications of 5G and small cell deployment.” His request, as the leader of his municipality, was for “clear direction, talking points, studies that have been done that show that there is no harm to our constituents and to the taxpayers on putting these small cells on towers close to libraries, close to schools, close to their homes.”

Speaking on behalf of the Federal Communications Commission (FCC), you explained, “Federal law actually says that state and local governments can’t take [radiofrequency] concerns into account given how much work has gone into this issue at the federal level...Both at the FCC and other expert health agencies in Washington, they stay very much up to speed on these issues and have reached the determination that these are safe.”

Most of our current regulations regarding radiofrequency safety were adopted in 1996 and have not yet been updated for next generation equipment and devices. For example, the FCC’s specific absorption rate (SAR) limits do not apply to devices operating above 6.0 GHz; however, 5G devices will operate at frequencies as high as or even exceeding 24 GHz. The FCC has acknowledged, “The SAR probe calibration, measurement accuracy, tissue dielectric parameters and other SAR measurement procedures required for testing recent generation wireless devices need further examination.”<sup>1</sup>

Furthermore, the final results of the world’s largest and most expensive study to date on the link between radiofrequency radiation and cancer were only just released on November 1, 2018 by the National Toxicology Program (NTP)—an inter-agency program within the U.S.

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<sup>1</sup> Federal Communications Commission, Office of Engineering and Technology, Laboratory Division, “SAR Measurement Requirements for 100 MHz TO 6 GHz,” [https://apps.fcc.gov/kdb/GetAttachment.html?id=RUMcMDL7fmDLsdRSbcNoA%3D%3D&desc=865664%20D01%20SAR%20Measurement%20100%20MHz%20to%206%20GHz%20v01r04&tracking\\_number=28242](https://apps.fcc.gov/kdb/GetAttachment.html?id=RUMcMDL7fmDLsdRSbcNoA%3D%3D&desc=865664%20D01%20SAR%20Measurement%20100%20MHz%20to%206%20GHz%20v01r04&tracking_number=28242).

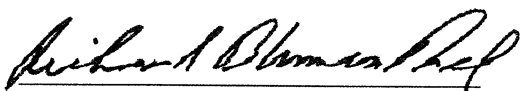
Department of Health and Human Services.<sup>2</sup> That study, which began in 1999, is limited in scope to radiofrequency radiation associated with 2G and 3G cell phones. As you know, this study found evidence of cancerous heart tumors, as well as some evidence of cancerous brain tumors, in male rats exposed to exposed to high levels of radiofrequency radiation like that used in 2G and 3G cell phones. However, researchers have cautioned that findings “do not apply to 4G or 5G technologies.”<sup>3</sup>

To ensure we communicate accurate information to our constituents—many of whom have concerns similar to Mayor TenHaken’s—we respectfully request you provide to our offices the 5G safety determination from FCC and relevant health agencies that you referred to during the field hearing. Please also include current citations for the studies informing that safety determination. Like Mayor TenHaken, we recognize that the literature on 5G technology may be limited “because it’s so new,” and are interested in acquainting ourselves with the latest studies evaluating the health effects of high-band frequencies and modulations that would be used in 5G networks.

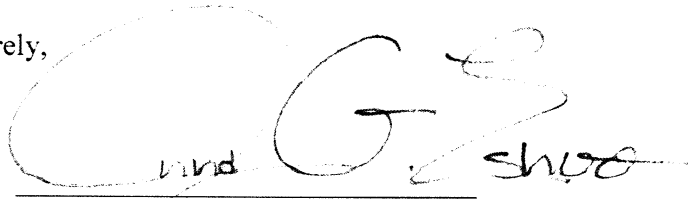
The cooperation and partnership of localities and states will be critical as we move forward with this transformative technology, which promises wireless speeds as much as five times faster and with much lower latency. Carriers will also need updated guidelines governing the authorization of devices to be used with 5G. We also believe it is critical for the FCC to act on its March 27, 2013 Further Notice of Proposed Rulemaking and Inquiry to ensure all individuals, and especially those working in close proximity to the hundreds of thousands of small cell facilities to be deployed, are protected from any kind of excess radiofrequency radiation.<sup>4</sup>

We look forward to hearing from you on this important matter. We respectfully request a response by December 17, 2018.

Sincerely,



Richard Blumenthal  
United States Senator



Anna G. Eshoo  
Member of Congress

<sup>2</sup> William J. Broad, “Study of Cellphone Risks Finds ‘Some Evidence’ of Link to Cancer, at Least in Male Rats,” New York Times (New York, New York), November 1, 2018, <https://www.nytimes.com/2018/11/01/health/cellphone-radiation-cancer.html>.

<sup>3</sup> National Toxicology Program, “Cell Phone Radio Frequency Radiation Studies.”

[https://www.niehs.nih.gov/health/materials/cell\\_phone\\_radiofrequency\\_radiation\\_studies\\_508.pdf](https://www.niehs.nih.gov/health/materials/cell_phone_radiofrequency_radiation_studies_508.pdf).

<sup>4</sup> Federal Communications Commission, “Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies; Proposed Changes in the Commission’s Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields,” 28 FCC Rcd 3498 (4), <https://docs.fcc.gov/public/attachments/FCC-13-39A1.pdf>.