



Montgomery County Group

September 24, 2018

Montgomery County Sierra Club Group Testimony on ZTA 18-11 Telecommunications Towers – Approval Standards

President Reimer and Council Members, the Montgomery County Sierra Club respectfully submits the following testimony on ZTA 18-11.

We greatly appreciate the Council's passage of a Resolution, declaring that we face a climate emergency. The Sierra Club has been working with the County, various organizations, residents, and businesses to reduce emissions to help avert the worst effects of climate instability. We recognize that in order to reduce emissions to zero by 2035, the County must move with unprecedented speed to change course of many of the programs designed to reduce carbon and avoid adding more carbon emissions by not enacting legislation and zoning that will greatly increase emissions.

As stated in the letter we submitted on May 15, 2018, regarding ZTA 18-11, we would like to reiterate that we oppose this ZTA and urge you not to pass it in its current form today. This amendment will enable a huge expansion in the construction and use of cellular communications towers, to facilitate a transition away from wired networks to a wireless network of mobile broadband services called 5G. While this new technology may expand cell service, unfortunately, it also will likely result in dramatically increased energy consumption, and therefore much higher greenhouse gas emissions, increasing the carbon footprint of the county.

And while other groups and individuals have addressed additional negative impacts of this ZTA, the Sierra Club is calling for more analysis and research to be done regarding the impact that expanding to 5G network will have on energy consumption in the county. Studies by electrical engineers have concluded that "wireless technologies will continue to consume at least ten times more power than wired technologies, when providing comparable access rates and traffic volumes." (Communications magazine of the Institute of Electrical and Electronics Engineers <https://www.ieeexplore.ieee.org/abstract/document/5783987>)

More recently, five leading electrical engineer researchers wrote in an editorial in the same Journal that, "one of the most critical challenges in the design and deployment of the fifth generation (5G) system is the development of green and sustainable networking and computing protocols that are capable of supporting the advocated 1000x data rates and throughput with a reasonable and affordable energy consumption level" (IEEE Wireless Communications, August 2017 <https://digital.comsoc.org/publication/ieee-wireless-communications>)

ZTA 18-11 Sierra Club Testimony Continued

This is no small matter, according to some estimates, and noted in the publication, The Guardian, energy demand from all internet-connected devices is increasing by about 20% a year and if such trends continue, these communications technologies could be responsible for 14% of global greenhouse gas emissions by 2040, undermining all our efforts to combat climate change.

<https://www.theguardian.com/environment/2017/dec/11/tsunami-of-data-could-consume-fifth-global-electricity-by-2025>.

For these reasons, ZTA 18-11 should not be enacted without careful assessment of its energy use impact. We see no evidence that such an assessment has occurred and therefore, we urge you to: (1) defer action on ZTA 18-11 until its impact on energy use has been thoroughly assessed, and; (2) to enact this ordinance only if the Council has a reasonable basis to conclude that the 5G technology facilitated by this kind of ordinance will not exacerbate the problem of controlling greenhouse gas emissions, or if the Council will commit to offsetting increased energy usage / greenhouse gas emissions from implementing 5G by obtaining far greater savings in energy usage in other areas than now contemplated.

We know that what we do will not, by itself, solve the threat of climate change. However, we have made a commitment to reducing greenhouse gases and we now have the opportunity to lead the way, to become an example for other cities and counties, and to show how government can help forge a path to dramatically reduce emissions.

Thank you very much for your consideration and the opportunity to provide testimony on this matter and we look forward to being a partner with the county as it moves to more aggressively and effectively address climate change.

Sierra Club – Montgomery Group Executive Committee

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