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May 19, 2016

### VIA ELECTRONIC SUBMISSION

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

**Re: WC Docket Nos. 10-90, 14-58, 07-135, 05-337, and 03-109; GN Docket No. 09-51; CC Docket Nos. 01-92 and 96-45; WT Docket No. 10-208**

Dear Ms. Dortch:

ViaSat hereby responds to the written *ex parte* presentations submitted by the Utilities Technology Council (“UTC”) and the National Rural Electric Cooperative Association (“NRECA”) on May 18, 2016 in this proceeding (collectively, the “UTC/NRECA Presentation”). In those presentations, UTC and NRECA urge the Commission to abandon the use of market-based mechanisms that would efficiently allocate limited Connect America Fund (“CAF”) support to the most cost-effective service providers in favor of a complex “points” scheme that would favor comparably inefficient fiber-based providers, delay the initial selection of winning bidders and invite numerous post-selection challenges, dramatically increase funding requirements, and consequently give rise to a “funding gap” that would leave hundreds of thousands of households without access to critical broadband services.<sup>1</sup>

The self-serving nature of the UTC/NRECA proposal is evident from the undue emphasis it places on latency—a characteristic that need not have any appreciable impact on the end-user experience<sup>2</sup>—and insufficient emphasis it places on far more important performance metrics, like speed. Notably, the UTC/NRECA proposal awards 25 points to a bidder offering 50 ms of latency even though this reduction would not provide any benefit whatsoever to the vast majority of end users. At the same time, the proposal awards absolutely no points to a provider offering speeds of up to 99 Mbps—even though increasing speed has a direct, significant, and measurable

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<sup>1</sup> See generally Letter from ViaSat to FCC, WC Docket No. 10-90, at 2-3 (Apr. 14, 2016).

<sup>2</sup> *Id.*

impact on the end-user experience for the vast majority of Internet applications.<sup>3</sup> The UTC/NRECA proposal also could result in the Commission paying *ten times the level of support* it otherwise would need to extend service, simply to have a provider that would provide 100 ms of latency—even though, again, higher levels of latency need not have any meaningful impact on the end-user experience. These proposed trade-offs reflect an obvious attempt to “box out” more cost-effective satellite providers while rewarding fiber-based providers for providing an illusory benefit. The result would be dramatically inflated funding requirements without any meaningful benefit to end users.

UTC and NRECA also engage in a misguided effort to malign satellite networks and technologies, which in many cases would be able to provide quality broadband service at a fraction of the cost of terrestrial alternatives that UTC and NRECA support. ViaSat takes this opportunity to respond to three of the arguments made by UTC and NRECA.

**First**, UTC and NRECA incorrectly suggest that satellite technologies somehow are inferior to terrestrial technologies because “satellite capacity expansion requires both substantial upfront investments and extended lead times to construct and deploy new satellites.”<sup>4</sup> In fact, the types of investments required to expand satellite broadband capacity and capabilities to meet CAF II requirements (*i.e.*, time and money) are conceptually no different than those needed to “scale” terrestrial networks (which is why the Commission has offered billions of dollars and six full years to allow incumbent support recipients to fully deploy their networks). The dramatic improvements in satellite capacity and capabilities that have significantly outpaced those available over terrestrial networks in recent years have been made possible by multiple generations of even more advanced satellites that are now being launched every few years: ViaSat-1 in 2011 (~150 Gbps), ViaSat-2 (~300 Gbps) in early 2017, and ViaSat-3 (over 1,000 Gbps) in 2019.<sup>5</sup> These improvements will more than keep pace with the efforts of terrestrial providers to “scale” their networks.

**Second**, UTC and NRECA misleadingly claim that satellite technologies cannot be scaled efficiently and selectively cite language from ViaSat’s Annual Report as “support” for this contention. More specifically, UTC and NRECA cite language in which ViaSat’s Chief Executive Officer explains that “once a satellite is designed and built there is nothing that can be

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<sup>3</sup> The UTC/NRECA proposal awards 25 points to a bidder only after it offers speeds in excess of 250 Mbps—10 times the presumptive 25 Mbps baseline. UTC/NRECA Presentation at 2.

<sup>4</sup> UTC/NRECA Presentation at 4.

<sup>5</sup> See *ViaSat Announces Third Quarter Fiscal Year 2016 Results* (Feb. 9, 2016), available at <http://investors.viasat.com/releasedetail.cfm?ReleaseID=954130>.

done to turn a 1 Gbps satellite into even a 7 Gbps satellite, let alone a 100 Gbps satellite.”<sup>6</sup> UTC and NRECA incorrectly assume that the inability to “upgrade” an individual *satellite* once deployed means that a *satellite network* cannot provide evolving levels of service to end users over time. This simply is not the case; indeed, older satellites can be and are utilized alongside newer satellites in a single network and together expand aggregate capacity, which can be used to serve additional customers with higher speeds and capacity allowances—*i.e.*, to “scale” the network. UTC and NRECA also ignore the more fundamental point that dramatic improvements in satellite design are creating significant expansions of capacity over time, as reflected in the differences between ViaSat-1, -2, and -3. In fact, the same passage in ViaSat’s Annual Report cited by UTC explains that “the past decade has seen orders of magnitude in growth in the capacity of the satellites themselves—which dwarfs the distinctions among ground systems.”<sup>7</sup>

*Third*, UTC and NRECA imply that satellite technologies are somehow inferior simply because satellite network capacity is shared between subscribers, which UTC and NRECA wrongly claim “will result in substantially reduced throughput to each subscriber.”<sup>8</sup> The truth is all networks, regardless of technology (*e.g.*, wireline, terrestrial wireless, cable, satellite) have points where bandwidth is aggregated and shared among multiple end users. The relevant question is not whether a given network “shares” capacity, but whether and how the network operator adequately manages congestion. Notably, even fiber-to-the-node networks encounter congestion issues at certain points, which can significantly limit the speed and other benefits theoretically available with fiber technologies. In contrast, ViaSat has designed its networks to deliver traffic directly from the end user to the satellite and from the satellite to an earth station that efficiently connects to the rest of the Internet (and vice versa), bypassing many of the congestion issues and bottlenecks that can arise in terrestrial networks. Moreover, the networks that ViaSat is deploying allocate adequate per-subscriber bandwidth and otherwise ensure that high-quality service is delivered to consumers. And ViaSat is achieving these objectives in a manner such that its cost and funding requirements per end user are competitive with terrestrial technologies—including fiber.

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<sup>6</sup> UTC/NRECA Presentation at 4; ViaSat 2015 Annual Report, at 4, *available at* [http://files.shareholder.com/downloads/VSAT/1165864798x0x842449/D34054DA-5DC6-4B52-8697-8EF0A9211380/Annual\\_Report\\_2015\\_033\\_Web.pdf](http://files.shareholder.com/downloads/VSAT/1165864798x0x842449/D34054DA-5DC6-4B52-8697-8EF0A9211380/Annual_Report_2015_033_Web.pdf).

<sup>7</sup> *Id.* at 4-5.

<sup>8</sup> UTC Presentation at 4.

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Please contact the undersigned should you have any questions.

Respectfully submitted,

/s/ John P. Janka

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