



April 14, 2022

The Honorable Alan Davidson
Administrator
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Ave., NW
Washington, D.C. 20230

Re: The Broadband Equity, Access, and Deployment Program Notice of Funding Opportunity

Dear Administrator Davidson:

On behalf of Viasat, I write to ensure the forthcoming Notice of Funding Opportunity (NOFO) for the Broadband Equity, Access, and Deployment (BEAD) Program reflects Congress' intent surrounding the internet access technical criteria that NTIA will use to govern state programs. Namely, that NTIA will include all technologies within the competitive choices available to the Governors to best serve the needs of their citizens, and do so without imposing weighting criteria that unfairly disadvantage one technology over another.

To this end, I am providing the enclosed "Assessment of GSO Satellite Capabilities vs. Alternative Internet Access Technologies," prepared by Roberson & Associates ("Roberson Report"), to demonstrate how geostationary satellite (GSO) delivered broadband is a proven, reliable way to expand broadband connectivity that surpasses the "gold standard" for broadband consumers' technical requirements for critical broadband applications.

By way of background, Viasat is a global communications company that connects homes, businesses, governments, and militaries with high-speed broadband services and secure networking systems. We are able to extend critical broadband connectivity to the unserved and underserved at a much lower cost per home served than other technologies, quickly extend service to the hardest to reach communities (typically within a day), and provide consistently high-quality and reliable broadband services. Throughout the COVID-19 pandemic, we were proud to support many millions of hours of critical broadband applications, such as telemedicine, distance learning, video streaming, video conferencing, voice, interactive applications, social networking, web (including online sales), messaging (including email), file transfer, security, cloud services, and internet of things applications.

From our experiences, we know firsthand that providing reliable broadband services in unserved and underserved American communities requires a multitude of technologies. Congress recognized that principle in establishing the BEAD program in the Infrastructure, Investment and Jobs Act (IIJA). There, Congress established technical criteria for the BEAD program's internet access service requirements that would provide state governments maximum flexibility to

respond to communities' specific broadband infrastructure needs. NTIA must recognize and carry through this mandate in developing criteria for the forthcoming NOFO on a technology-neutral basis. Doing so will permit states to construct competitive broadband incentive programs that are truly market-based.

We are confident that GSO broadband solutions present state governments appealing technology solutions to connect American communities if NTIA adheres to these statutory requirements, and does not adopt weighting criteria that unfairly disadvantage one technology over another.

As explained in the Roberson Report, GSO satellite technology surpasses consumer expectations for mission critical broadband applications¹ (including those discussed above) and is capable of doing so at speeds in excess of 150 Mbps; with extremely low jitter and packet loss; and with coverage of roughly 100 percent of the continental U.S.² And, as the Roberson Report concludes, GSO technology handles these tasks in a manner where the end-user feels that the system is reacting instantaneously; the end-user's flow of thought stays uninterrupted; and the end-user's attention stays focused without distraction.³

Critically, GSO technology also exceeds the gold standard for consumer applications for key latency requirements.⁴ This includes transmission time, queueing delay, processing time at the source, destination and intermediate switches, buffering delay at nodes, and packet retransmission - both at the link level and end-to-end.⁵ In other words, GSO broadband access technology solutions meet the gold standard for latency criteria in every critical user application when properly analyzing latency within the full context of the entire network path. As the Roberson Report makes clear: "The key requirement is that an access technology meets the application requirement when all delay elements are considered."⁶ Focusing on one limited element of latency, such as link or propagation delay over one discrete element of the network, is not an independently accurate assessment that reflects internet users' experience.⁷

The Roberson Report also concludes, accurately, that no one internet access technology solution "uniformly dominates the rest along various metrics."⁸ In many geographic areas, for instance, fiber will be a cost-prohibitive solution that does not adequately respond to community needs. Low earth orbit satellite (LEO) solutions, likewise, suffer from limits on actual usable capacity, frequency reuse limitations, constraints on density of coverage, and inconsistency in quality, availability and reliability of service.⁹

Congress recognized this phenomenon when constructing the BEAD program technical criteria. As the body that understands community needs better than anyone, Congress crafted technology

¹ Assessment of GSO Satellite Capabilities vs. Alternative Internet Access Technologies, Roberson and Associates, LLC, 2, 12, 16 (April 7, 2022).

² *Id.* at 13.

³ *Id.* at 11.

⁴ *Id.* at 15.

⁵ *Id.*

⁶ *Id.* at 15 (emphasis added).

⁷ *Id.*

⁸ *Id.* at 2.

⁹ *Id.* at 14.

standards for broadband service requiring speeds not less than 100 megabits per second for downloads and 20 megabits per second for uploads; a latency standard "sufficiently low to allow reasonably foreseeable, real-time, interactive applications"; and "with network outages that do not exceed, on average, 48 hours over any 365-day period."¹⁰

The Roberson Report establishes that GSO technology meets or exceeds these statutory standards in every critical consumer application. NTIA must therefore adopt eligibility criteria implementing the BEAD program guidelines in a manner that will allow GSO providers to compete with other technology solutions on equal terms; particularly in geographic areas where fiber is not a feasible alternative. The goal is to deploy broadband to all Americans, and NTIA should not add barriers that were not intended by Congress.

Thank you for taking the time to consider these recommendations. We look forward to working with NTIA to provide Americans access to reliable and affordable broadband services, and also provide Governors with the widest range of competitive alternatives from which they can seek to meet the needs of their citizens.

Sincerely yours,



John P. Janka
Chief Officer, Global Government Affairs & Regulatory

Enclosure: Assessment of GSO Satellite Capabilities vs. Alternative Internet Access Technologies

¹⁰ Pub. L. 117-58 (Nov. 15, 2021), Sec. 60102 (f)(4)(A)(i).