

November 13, 2018

FILED VIA ECFS

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

Re: **The Uniendo a Puerto Rico Fund and the Connect USVI Fund**
WC Docket No. 18-143
Written Ex Parte Presentation

Dear Ms. Dortch:

AeroNet Wireless Broadband LLC (“AeroNet”), pursuant to Section 1.1206(a) of the Commission’s rules, respectfully submits the following in response to the above-referenced Notice of Proposed Rulemaking, which proposes to establish a long-term funding method for the restoration and expansion of broadband services in Puerto Rico following Hurricanes Irma and Maria in 2017 (the “Puerto Rico Fund”).¹ The Commission should be commended for taking this important step to ensure the successful rebuilding, improvement and hardening of Puerto Rico’s devastated communication networks.

AeroNet is one of Puerto Rico’s leading providers of fixed wireless and fiber broadband. Founded in 2001, AeroNet today serves approximately 5,000 enterprise and 2,000 residential customers in Puerto Rico using unlicensed spectrum. AeroNet provides broadband and dedicated Internet access in Puerto Rico and the U.S. Virgin Islands through a network of over 250 sites and over 500 miles of fiber. Its customers range from small businesses to critical enterprises such as banking, food and gas retail chains and government agencies like FEMA, the U.S. Army and U.S. Corps of Engineers.

Like all broadband operations in Puerto Rico, AeroNet’s network was severely damaged by Hurricanes Irma and Maria. But unlike some providers whose networks proved particularly vulnerable to the high winds and heavy rains, AeroNet was able to quickly restore service to its customers. Fifty percent of AeroNet’s network was re-established just eight weeks following the second hurricane, and 95 percent was re-established after just 16 weeks. AeroNet’s rapid recovery was made possible by several factors, including the uniqueness of fixed wireless infrastructure and its faster (relative to wireline services) deployment and restoration capabilities.

AeroNet’s successful restoration efforts do not diminish its need for the type of long-term support that the Commission proposes in the *NPRM*. Many parts of Puerto Rico remain unserved and underserved by broadband-capable networks. And even those areas that are fully

¹ See *The Uniendo a Puerto Rico Fund and Connect USVI Fund, et al.*, Order and Notice of Proposed Rulemaking, FCC 18-157, WC Docket Nos. 18-143, 10-90 and 14-58 (rel. May 29, 2018) (“*NPRM*”)

served remain susceptible to the next major hurricane because they are not sufficiently hardened. The forward-looking Puerto Rico Fund provides an urgently needed means to prepare for and protect against the inevitable natural disasters to come. AeroNet offers the following framework to assist the Commission in allocating funding in a manner that best promotes reliable broadband networks capable of serving all of Puerto Rico.

The Commission proposes to select winning Puerto Rico Fund proposals based primarily on price per-location.² Price should be the primary objective that the Commission considers given its obligation to manage Universal Service Funds efficiently. But, as the Commission recognizes, price cannot be the sole consideration. Other factors, including network resiliency, network deployment timing and network performance also need to be taken into account.³ Of these factors, network deployment timing and network resiliency should figure most prominently because a broadband service, regardless of performance, only matters to a subscriber if that service is available. Applicants able to demonstrate the ability to deploy networks quickly to unserved areas (including served areas rendered unserved in the wake of hurricanes) should receive a comparative preference, as should applicants able to demonstrate a network designed to withstand major hurricanes. AeroNet thus agrees with the commenters in this proceeding calling for preferences for expeditious network deployment⁴ and network resiliency.⁵

The Commission should also consider funding the development of networks recognized for their reliability – in particular, Internet of Things (“IoT”) or Machine-to-Machine (“M2M”) networks that support enterprise operations. Other networks that rely on miles of aerial fiber or hundreds of cell towers are more likely to be harmed by major hurricanes and are likely to take a very long time to be restored. By contrast, low-band IoT and M2M networks can be constructed with a small number of access points located on fortified towers, and can be restored very quickly to enable commercial transactions at grocery stores, hardware stores, gas stations, banks and other “first needs” that are essential following natural disasters.

The Commission proposes to use Puerto Rico’s 78 municipios as the basic geographic area for Puerto Rico Fund support.⁶ AeroNet agrees with this approach as it will achieve the economies of scale noted by the Commission that smaller geographic areas cannot. However, should the Commission agree with commenters arguing that proposals at the municipio level are

² See *NPRM* at ¶ 55. The price would be the lowest cost to the Puerto Rico Fund, adjusted by the preferences and/or weights the Commission may assign to network resiliency, network deployment timing and network performance.

³ *Id.*

⁴ See, e.g., Comments of Liberty Cablevision of Puerto Rico, LLC, WC Docket No. 18-143 (filed July 26, 2018) at 17; Comments of VPNet, Inc., WC Docket No. 18-143 (filed July 26, 2018) (“VPNet Comments”) at 10.

⁵ See, e.g., Comments of The Telecommunications Regulatory Board of Puerto Rico, WC Docket No. 18-143 (filed July 26, 2018) (“TRB Comments”) at 19.

⁶ See *NPRM* at ¶ 47.

not appropriate for the more remote areas of Puerto Rico,⁷ AeroNet urges the Commission to select recipients based on a minimum geographic area no smaller than census tracts.

The Commission proposes broadband service obligations that Puerto Rico Fund support recipients must meet, including networks capable of a download speed of 10 Mbps and upload speed of 1 Mbps.⁸ AeroNet believes these thresholds are inappropriately low and that the minimum speed metric should instead meet the defined broadband connection speed of 25/3 Mbps established by the Commission. The Commission's rationale for adopting the 25/3 Mbps metric was sound: slower connectivity is simply insufficient for many ordinary Internet uses. That rationale applies to broadband use in Puerto Rico as well as anywhere else in the United States. The citizens of Puerto Rico deserve the same level of robust service as other U.S. citizens and that is not possible with a 10/1 Mbps standard. On this point, AeroNet agrees with those commenters that either call for a minimum speed standard of no less than 25/3 Mbps⁹ or at the very least favor a preference to funding applicants that offer download and upload speeds of up to 25/3 Mbps or 100/20 Mbps.¹⁰

AeroNet supports the roundtrip latency service obligation proposed by the Commission as an appropriate benchmark for viable broadband service in Puerto Rico.¹¹ Other parties to this proceeding agree.¹² The Commission should not be swayed by those commenters favoring a more relaxed latency requirement. These satellite industry commenters stress the importance of providing Puerto Ricans with the full panoply of broadband services when advocating for faster minimum broadband speeds.¹³ Yet their simultaneous call for latency greater than 100 ms runs the risk that certain broadband services will be unacceptably degraded if not rendered unobtainable altogether. The satellite industry can't have it both ways.

To the extent that a portion of Puerto Rico Fund support is dedicated to the restoration and hardening of fiber backbones, AeroNet urges the Commission to set aside a portion of the funds to establish a neutral, hardened middle-mile fiber network through Puerto Rico in which all operators and the government can participate and utilize for their backbone operations. Such

⁷ See, e.g., TRB Comments at 13; VPNet Comments at 9.

⁸ See NPRM at ¶ 60.

⁹ Comments of Hughes Network Systems LLC, WC Docket No. 18-143 (filed July 26, 2018) ("Hughes Comments") at 11.

¹⁰ See VPNet Comments at 10.

¹¹ See NPRM at ¶ 60 (proposing roundtrip latency of no greater than 100 ms and a minimum usage allowance of the higher of 170 GB per month or one that reflects the average usage of a majority of customers).

¹² See, e.g., Comments of Puerto Rico Telephone Company, Inc., WC Docket No. 18-143 (filed July 26, 2018) at 20; VPNet Comments at 11.

¹³ See, e.g., Hughes Comments at 12; Comments of SES Americom, Inc. and O3B Limited, WC Docket No. 18-143 (filed July 26, 2018) at 2.

fiber network would need to be constructed following rigorous specifications to guarantee its maximum survivability during most emergency events.

In sum, AeroNet applauds the Commission's efforts to restore and expand broadband networks in Puerto Rico, and stands ready to further assist the Commission implement this important initiative.

Respectfully submitted,



Gino A. Villarini
President
AeroNet Wireless Broadband LLC