

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
The Uniendo a Puerto Rico Fund and the Connect USVI Fund)	WC Docket No. 18-143
)	
Connect America Fund)	WC Docket No. 10-90
)	
ETC Annual Reports and Certifications)	WC Docket No. 14-58

**COMMENTS OF
THE TELECOMMUNICATIONS REGULATORY BOARD
OF PUERTO RICO**

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The Telecommunications Regulatory Board of Puerto Rico (“the Board”) respectfully submits these comments in the above-captioned proceeding.¹ The 2017 hurricane season caused devastating destruction to Puerto Rico, including its telecommunications infrastructure. Puerto Rico’s government estimates that the island’s communications networks sustained approximately \$1.5 billion of damage. Plainly, such repairs cannot be addressed in the ordinary course by Puerto Rico providers. For this reason, the Board applauds the Commission’s efforts to move rapidly to direct additional, critical funding to Puerto Rico.

The Board thanks the Commission for dedicating a full proceeding to an important issue – the restoration and expansion of communications service in hurricane-ravaged Puerto Rico. The Board fully supports the overall mission of the Uniendo a Puerto Rico Fund and submits these comments to share its insights regarding how best to distribute funding and ensure it is utilized effectively and in the best interests of the people of Puerto Rico. As the Board has consistently

¹ Order and Notice of Proposed Rulemaking, *The Uniendo a Puerto Rico Fund and the Connect USVI Fund, et al.*, WC Docket No. 18-143, FCC-18-57 (May 29, 2018) (“Notice”).

emphasized to the Commission, Puerto Rico faces unique challenges that significantly increase the costs of providing service on the island.

I. SUMMARY

The Board shares the Commission's goal of restoring and expanding broadband infrastructure across the island of Puerto Rico. The Uniendo a Puerto Rico Fund is a good starting point for recovery, but the Board believes that more will be needed. As an island territory of the United States, Puerto Rico poses unique challenges to providers of broadband infrastructure. The physical and legal challenges of importing equipment and installing plant are compounded further by the low-income and high poverty level of the island's population. The hurricanes of 2017 have intensified Puerto Rico's difficulties exponentially. The Board keenly feels that its mission to restore broadband service and expand resilient infrastructure is critical to improving the welfare of Puerto Rico's population and the future economy of the island. As such, the Board is grateful for the Commission's attention to the issue and the opportunity to structure funds for this vital need.

The Board supports the Commission's approach to the Stage 1 of the Uniendo a Puerto Rico Fund and generally agrees with the approach to the Stage 2 funding. The Board recommends that the Commission calculate support based on pre-hurricane subscriber levels in order to facilitate recovery for a fully restored economy in Puerto Rico. Specifically, with regard to Stage 2 funding for wireline providers, the Board advises that the Commission adopt a negotiated request-for-proposal process rather than a quasi-auction competitive proposal process primarily because (1) the Connect America Cost Model is inappropriate for setting reserve prices, given Puerto Rico's unique challenges; (2) municipios may be too large a geographic area to serve cost-effectively; and (3) the small number of providers on the island will limit bids in the first instance.

Rather, the Board recommends that the Commission collaborate with the Board in (1) developing a scoring matrix for the proposals that prioritizes speed, resiliency, and service to previously unserved areas; (2) establish deployment milestones and accountability measures for performance; (3) evaluate and negotiate proposals with the provider; (4) monitor execution of the proposals; and (5) determine whether additional support is needed to achieve the Commission's goals of restoring and advancing service throughout Puerto Rico.

If the Commission chooses to adopt the competitive proposal approach outlined in the Notice, the Board recommends that the Commission should make funding available to geographic areas smaller than municipios. There are at least ten municipios that have never been served adequately because it is cost-prohibitive to serve the entire municipio. A provider may find a cost-effective way to serve several barrios within these municipios. The Commission should also use another mechanism to establish reserve prices. The CAM is based on assumptions that are appropriate for the mainland that do not hold true in Puerto Rico, where shipping costs add to expense of infrastructure deployment and low-income levels erode the take rate. Further, the FCC should adjust cost thresholds to ensure funding of comparable service and prioritize areas that have never been served. Because providers rationally will restore service to areas that will yield revenue, the Uniendo a Puerto Rico Fund should be deployed to encourage service in unserved areas. Further, if the Commission adopts the competitive proposal approach, the awards should be conditioned on serving all locations within the municipio in order to ensure that unserved areas are reached. The Board agrees that deployment milestones and accountability measures, as proposed by the Commission in the Notice are reasonable requirements for the award winners. The Board also supports the imposition of resiliency requirements and increased transparency in outage reporting.

II. INTRODUCTION

The Board is the local Puerto Rico agency responsible for regulating telecommunications and information services in the Commonwealth.² Established by the Puerto Rico Telecommunications Act in 1996, the Board is charged with protecting the residents of Puerto Rico and ensuring a pro-competitive telecommunications market.³ In particular, the Board is directed to:

- establish specific, predictable, and sufficient support mechanisms to preserve and develop universal service;
- promote the investment of capital in the development of telecommunications infrastructure;
- ensure the availability of the broadest range of competitive possibilities in the offering of telecommunications services and facilities;
- promote competition and use the market forces as key factors in determining the prices, terms, availability and conditions of the service;
- give access to telecommunications services that are reasonably comparable to those provided in urban areas to consumers throughout the island, including low-income persons and those who reside in rural areas or in areas where access to such services is costly; and
- guarantee the enjoyment of the service offered, without fear of unreasonable interruptions or interference.

² 27 L.P.R.A. § 265 *et seq.*

³ Puerto Rico Telecommunications Act of 1996, Act 213-1996, as amended.

Since its creation, the Board has undertaken major initiatives to discharge its statutory mandate, including promoting increased access to telecommunications and information services, infrastructure deployment and protecting a competitive marketplace in Puerto Rico.⁴

The Board, since its designation as an ESF#2, has also been active in overseeing the restoration of telecommunications service on the island after devastating storms, most recently, the 2017 hurricane season. As such, the Board has unique insight into the current state of the communications networks in Puerto Rico, including the challenges and impediments in restoring and rebuilding, the vulnerabilities in the infrastructure, and the areas in greatest need. The Board has endeavored to keep the Commission apprised of the ongoing challenges in Puerto Rico.

The Board thanks the Commission for quickly developing the framework for Stage 1 funds, and strongly supports the prompt distribution of Stage 1 funding to assist with the restoration effort. The Board commits to providing the Commission whatever assistance and support it needs in implementing Stage 1. In particular, the Board commits to promptly review any eligible telecommunications carriers (“ETC”) applications, if necessary, to determine eligibility to receive Stage 1 funding.⁵ These funds represent a good down payment toward Puerto Rico’s recovery efforts. However, it is not enough to bring Puerto Rico back to the starting line; more may be needed to restore and advance broadband services throughout the island.

⁴ One of the Board’s highest priorities has been expanding high-speed broadband throughout Puerto Rico, particularly through the Gigabit Island Plan, which sought to achieve 99% of households having access to 10 Mbps download speeds and 70% of households having connection to 1 Gbps download speeds by 2020. The Gigabit Island Plan emerged from the successful collaboration represented by the Puerto Rico Broadband Taskforce, a non-partisan, public-private partnership created to help close the digital divide across Puerto Rico. One of the Board’s projects is establishing Internet Access Centers. In a partnership with the Puerto Rican government, these facilities provide free Internet access, strategically located throughout Puerto Rico at different strategic points in city centers, governmental centers (CSIs), schools and other points where citizens can benefit from access to networks and services. However, in the wake of the 2017 hurricanes, the Gigabit Island Plan’s goals are in jeopardy.

⁵ Notice, ¶ 19.

III. STAGE TWO FUNDING FOR LONG-TERM REBUILDING IN PUERTO RICO IS ESSENTIAL

As the Board has consistently emphasized to the Commission, Puerto Rico is a uniquely challenging environment for operating and maintaining telecommunications networks. Telecommunications providers on the island regularly face much higher operating costs due to the tropical environment, which increases maintenance requirements and reduces the useful life of equipment and the need to ship all equipment and parts to the island. Moreover, the very low average income and high poverty level of the population makes it almost impossible to recover the very high costs of operation. There are also the extraordinary costs of maintaining and repairing networks because of hurricanes and other tropical storms, which are a regular hazard to Puerto Rico's infrastructure.

However, the 2017 hurricane season was unusually destructive. Hurricanes Irma and Maria delivered a one-two punch to Puerto Rico that caused widespread devastation. Hurricane Maria, in particular, was a Category 4 storm with over 155 mph winds. It was the strongest storm to hit the island in almost a century. The impact of the hurricane spanned the entire island, damaging 91 percent of Puerto Rico's telecommunications infrastructure. The storm interrupted power to 100 percent of the island. Many homes and businesses were severely damaged or destroyed. Efforts to restore the telecommunications networks are underway, but the costs are staggering – estimated at \$1.5 billion in infrastructure before accounting for other costs like power outages that continue to this day. In light of current uncertainty with regard to the returning population, it will be impossible for providers to absorb these costs from normal revenues.

Therefore, the Board applauds the Commission for its attention to the critical issues of restoration and deployment of the communications infrastructure in Puerto Rico. The Board thanks the Commission for the initial \$65.8 million in funding for Puerto Rico and the U.S. Virgin

Islands issued after the debilitating hurricanes, as well as its decision not to offset that funding against ongoing subsidies. The Board also believes that the \$51.2 million in Stage 1 funding of the Uniendo a Puerto Rico Fund constitutes an important down payment toward restoration of service.

However, these funds will not be enough for full restoration and meaningful expansion of the telecommunications infrastructure across the island. The Commission cited the \$1.5 billion in damage inflicted by the hurricanes on telecommunications infrastructure in Puerto Rico, but the cost of recovery continues to mount, with carriers spending millions of dollars per week on fuel for power generators that continue to support cell sites even now, ten months after the hurricanes. Power outages continue to hamper recovery efforts and exacerbate the costs, which start at a higher baseline on the island, given the transportation requirements under the Jones Act required for nearly all equipment and other supplies required for restoration. Carriers also have paid over \$200 million in credits to customers for loss of service, making the investment for restoration even more difficult. Further, in restoring networks, prudent providers will incur greater costs to harden infrastructure against the imminently approaching hurricane season.

Moreover, mere restoration of service to pre-hurricane levels will fail to address the unserved and under-served areas of the island. Even before the 2017 hurricanes, at least ten municipios were underserved. This is because Puerto Rico is not properly classified as rural, with 43.5 percent of the population living below the poverty line, almost three times the national average of 14 percent.⁶ The median household income is \$20,078.⁷ The unemployment rate is 9.6

⁶ *Puerto Rico*, DATA USA, <https://datausa.io/profile/geo/puerto-rico/> (last visited Jul. 19, 2018).

⁷ *Id.*

percent,⁸ over twice that of the United States as a whole.⁹ This creates a smaller customer base with a lower adoption rate than may be expected on the U.S. mainland.

It is not only the welfare disparities that categorize Puerto Rico as difficult and costly to serve. There are also physical and legal barriers to installing infrastructure. The mountainous inland areas of the island contain rocky terrain that challenge deployment of all types of infrastructure – roads, electricity, water, as well as telecommunications. These physical challenges are exacerbated by mudslides and flooding triggered by tropical storms and hurricanes. The smaller islands, such as Vieques and Culebra, rely on submarine cables for both power and telecommunications, which were destroyed by the hurricane and have yet to reach pre-hurricane operating levels.¹⁰ As stated above, the entire territory of Puerto Rico faces higher costs given its insular nature, rendering it dependent primarily on ships and planes for supplies and equipment.¹¹

Without access to telecommunications infrastructure throughout the island, Puerto Rico's residents will continue to struggle economically. Social scientists and economists have long held that access to quality infrastructure is essential to economic growth and, even more importantly, accelerates the path out of poverty.¹² As such, the Board thanks the Commission for clearly noting

⁸ *Economy at a Glance: Puerto Rico*, U.S. BUREAU OF LABOR STATISTICS, <https://www.bls.gov/eag/eag.pr.htm> (last visited Jul. 19, 2018).

⁹ *Economy at a Glance: United States*, U.S. BUREAU OF LABOR STATISTICS, <https://www.bls.gov/eag/eag.us.htm> (last visited Jul. 19, 2018).

¹⁰ Rafael Bernal, *Puerto Rico Inches Forward as New Hurricane Season Looms*, THE HILL (Mar. 14, 2018), available at <http://thehill.com/latino/378261-puerto-rico-inches-forward-as-new-hurricane-season-looms>.

¹¹ See Thomas Grennes, *An Economic Analysis of the Jones Act*, MERCATUS CENTER, GEORGE MASON UNIVERSITY (2017), available at <https://www.mercatus.org/system/files/mercatus-grennes-jones-act-v1.pdf>. In reviewing the impact of the Jones Act on insular territories, such as Guam and Puerto Rico, the Mercatus Center cites a study that estimates that the Jones Act adds as much as \$537 million per year to costs of importing goods.

¹² See e.g., César Calderón & Luis Servén, *The Effects of Infrastructure Development on Growth and Income Distribution*, Policy Research Working Paper; No.3400, WORLD BANK, (2004), available at <https://openknowledge.worldbank.org/handle/10986/14136>. See also David Aschauer, *Is Public Expenditure Productive?*, 23 J. Monetary Econ. 177 (1989).

that Stage 2 funding should be distributed not only for the purpose of restoration, but also for improvement and expansion of service across Puerto Rico.¹³ As the Communications Act of 1934, as amended, recognizes, access to reliable telecommunications and information services is essential for all Americans, including those in insular areas like Puerto Rico.¹⁴ If Puerto Rico is to recover and move forward, which includes being able to attract residents and businesses back to the island, it needs to be able to offer reliable telecommunications and information services to all of its citizens at a level equivalent to services on the mainland.

IV. THE FCC SHOULD USE PRE-HURRICANE SUBSCRIBER COUNTS TO CALCULATE SUPPORT FOR ALL STAGE 2 FUNDING.

Accordingly, the Board agrees with the proposed distribution plans for Stage 2 funding for mobile providers. The Board does not oppose the proposed 80-20 percent split of total funding to Puerto Rico and the U.S. Virgin Islands, respectively, based on relative population.¹⁵ However, the Commission should continue to use pre-hurricane subscriber numbers for distributing funding. Given the continued instability affecting the basic infrastructure in Puerto Rico, the population is currently in flux. It is estimated that 6 percent of the population of Puerto Rico left the island in the first three months after Hurricane Maria and that number may increase over time.¹⁶ Until restoration has been completed, it is unclear how many residents will return to the island. Subscriber counts for any distribution of Stage 2 funding (mobile or wireline) should hew closely

¹³ Notice, ¶ 38 (asking how the territories can have access to comparable fixed voice and broadband-capable networks).

¹⁴ 47 U.S.C. § 254(b)(3).

¹⁵ Notice, ¶¶ 36, 82.

¹⁶ Agustín Criollo Oquero, *Puerto Rico lost 6% of its population after Hurricane Maria*, CARIBBEAN BUSINESS (Mar. 9, 2018), available at <http://caribbeanbusiness.com/puerto-rico-lost-6-of-its-population-after-hurricane-maria/>.

to the pre-hurricane subscriberships in order to ensure that infrastructure can be built for a restored Puerto Rican economy.

V. THE FCC SHOULD IMPLEMENT A REQUEST-FOR-PROPOSAL PROCESS TO MORE QUICKLY AND EFFICIENTLY DISTRIBUTE FUNDS

The Board also agrees that Stage 2 funding should be distributed as quickly as possible and agrees that an auction would likely delay disbursement of the subsidies for wireline providers. Moreover, there are only two island-wide wireline providers on the island – Puerto Rico Telephone Company (PRTC) and Liberty Cable. An auction may prove to be too elaborate a solution, given this small number of providers. The Board advises, however, that the Commission’s proposal for using a competitive proposal process¹⁷ may not fit the island’s need for speedy and efficient distribution of funds. Rather than establish geographic areas and reserve prices for competitive proposals, the Board recommends that the Commission use a more flexible Request-for-Proposal process (RFP) under a Memorandum of Understanding between the Board and the Commission.

A. RFP Process is More Flexible and Suited to the Unique Needs of Puerto Rico

The Notice proposes to allocate Stage 2 wireline funds through a competitive process based on an evaluation of applications, primarily based on “price per location”, and on such additional factors as network resiliency, network deployment time, and network performance.¹⁸ Eligible applicants would be restricted to carriers that submitted FCC Forms 477 and had broadband networks prior to the 2017 hurricane season.¹⁹

¹⁷ Notice, ¶¶ 39 *et seq.*

¹⁸ Notice, ¶ 55.

¹⁹ Notice, ¶ 42.

The Board suggests that obtaining competitive proposals, but then committing to negotiate with recipients to modify the proposals as needed would be a more expedient and better solution. This process could resemble the typical corporate process of evaluating RFPs, which has proven to be efficient and successful. Such a process could reduce legal challenges, and speed carrier endorsement of the subsidies granted. The Board believes that Puerto Rico carriers face unique terrain, demographic, and other circumstances, not unlike the difficulties faced in Alaska.²⁰ Given that negotiations worked in developing the Alaska Plan,²¹ the Board believes that such an approach can be instrumental in helping to attain a successful result in Puerto Rico as well.

B. The Commission Should Collaborate with the Board to Develop, Evaluate, and Monitor Awarded Subsidies.

The Board is ready to assist the Commission in their shared goal of restoring and expanding broadband infrastructure in Puerto Rico. The Board has unique knowledge of the circumstances in Puerto Rico. The Board is on the ground in Puerto Rico, has a long history of working closely with providers on the island, and knows which areas lack sufficient telecommunications and information services. As such, the Board can be an effective partner for the Commission in ensuring funding is directed where it is most needed and prioritized to have the most impact. Since the hurricanes, the Board has been central to coordinating and monitoring recovery. The Board coordinates efforts between the carriers and local and federal agencies. It also has mapped critical infrastructure – hospitals, public safety answering points, police, and other services – against the availability of service to better prioritize restoration and recovery efforts. The Board’s staff worked in close contact with the providers of telecommunications service in order to coordinate fuel

²⁰ Notice, ¶ 75.

²¹ See *Connect America Fund; Universal Service Reform – Mobility Fund; Connect America Fund – Alaska Plan*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 10139, 10141-42, ¶ 5 (2016).

delivery, avoid confusion in physical infrastructure activity, and provide status updates to key stakeholders.²²

There are a number of ways in which the Board and Commission could productively collaborate. Ideally, the FCC and the Board would jointly develop a scoring matrix for evaluating proposals that would favor policy goals raised in the Notice. Greater weight should be assigned to proposals that: (1) offer speeds at 25/4 Mbps, with greater weight for higher speeds; (2) offer architecture hardened beyond the current baseline on the island; (3) implement resiliency measures at the last mile; (4) serve critical infrastructure; and/or (5) offer service in previously unserved areas. Further, greater weight would be given to proposals that cover a greater number of subscribers or reach a greater number of locations. This framework could ensure that rural areas of Puerto Rico receive special consideration in a way that the cost model used to establish support for price cap carriers, known as the Connect America Cost Model (“the CAM”) cannot. ETCs would be able to develop ten-year proposals for support to serve an area of any size, which would allow a collection of barrios to work with providers to develop proposals that would enable those barrios to gain service. This could be particularly useful in serving barrios within a municipio that is cost-prohibitive to serve completely. The Commission could collaborate with the Board to evaluate each proposal against the scoring matrix, awarding funding to those proposals with the highest scores until funding is depleted. With the limited number of broadband service providers, the Commission and/or the Board would be able to negotiate and discuss useful adjustments to the proposals in order to ensure that policy goals have been met.

²² The terms of a Memorandum of Understanding could govern the information sharing between the Board and clarify that the Commission ultimately retains the authority to make decisions on the disbursement of the Uniendo a Puerto Rico Fund. The Board would commit to keep confidential data confidential. However, the Board suggests that revealing data once the award is granted would improve transparency and reduce any possible criticism of the support disbursement process.

The Commission and Board should jointly establish the obligations and penalties for not meeting buildout milestones. The Board agrees that the Commission already has established a baseline of solid buildout requirements for the Alternative Connect America Cost Model (“A-CAM”) used by rural carriers on the mainland that can be transferred to the Uniendo a Puerto Rico Fund. The Board would also be able to assist with monitoring and accountability after funding has been disbursed.

VI. IF THE COMMISSION DOES NOT ADOPT A NEGOTIATED RFP APPROACH, THE BOARD RECOMMENDS THE FOLLOWING CHANGES TO THE COMPETITIVE PROPOSAL APPROACH

Should the Commission choose to continue with the competitive proposal process as envisioned in the Notice, the Board respectfully submits the following suggestions to improve the competitive proposal process.

A. The Commission Should Award Funding to Geographical Areas Smaller than Municipios

The Board generally supports many of the Commission’s proposals for structuring the Uniendo a Puerto Rico Fund, including limiting eligible applicants to providers with ETC designations, making all areas of Puerto Rico eligible for funding, using municipios as the basic geographic area for support, and requiring service to all locations within a funded geographic area. However, considering proposals at the municipio level may not be appropriate for all areas of Puerto Rico. Depending on the geography and municipality, towns in more rural, mountainous areas can be significantly smaller and may not be covered by proposals that plan buildout on a municipio-by-municipio basis. Therefore, it may be more appropriate for funding to be awarded to a combined group of barrios, where the municipio level may be too large to effectively cover their populations.

B. The CAM Model Is Not Appropriate for Identifying Locations or Setting Reserve Prices

The Board has historically argued that the CAM does not adequately address Puerto Rico's needs, and the Board's position remains unchanged as it relates to this proceeding. The Commission can bypass this problem by adopting an RFP process, allowing ETCs to submit proposals and distributing funds accordingly.

As the Board and carriers on the island have argued, the CAM is not designed to address the unique challenges in Puerto Rico and, generally, severely understates the costs for building and maintaining infrastructure on the island.²³ For example, it does not take into account the added costs associated with the climate and topography, having to ship in all equipment, fuel and related inputs, the challenging economic situation, and the low broadband penetration rates. The Commission in effect agreed that the CAM was inaccurate in determining costs and customer locations in insular areas when it allowed carriers to elect to continue to receive frozen amounts of universal service support, rather than support based on the CAM.²⁴ The CAM was designed based on mainland U.S. averages and, thus, is simply the wrong model for calculating the cost of service in Puerto Rico. Although Puerto Rico is not competing with the mainland U.S. for funding in this proceeding, the CAM continues to be an inadequate model to apply when calculating how best to serve Puerto Rico.

The CAM is particularly inappropriate for determining the number of locations in each geographic area. According to a study commissioned by PRTC, the CAM assumes a take rate of 80 percent for wireline, which is inapplicable to Puerto Rico, given its very low-income levels and

²³ Comments of Telecommunications Regulatory Board of Puerto Rico, WC Docket No. 10-90 (filed Nov. 1, 2013), at 6-8; Comments of Puerto Rico Telephone Company, Inc., WC Docket No. 10-90 (filed Sep. 12, 2013), at 10-23.

²⁴ *Connect America Fund*, Report and Order, 29 FCC Rcd 15664, 15661-63, ¶¶ 45-49 (2014).

high poverty rate.²⁵ The Board has no reason to doubt PRTC's study, which found that take rates are often half that. The CAM's exaggerated take rate assumptions would therefore drive down the per location costs modeled by the CAM to an unreasonably low degree, substantially understating the costs of providing service. Similarly, the CAM relies on the National Broadband Map for data relating to broadband deployment. However, in the Board's experience, the map overstates the speeds of service being received at many locations.

In addition, as recognized in the Notice, it makes sense to require that infrastructure rebuilt with this federal funding is reasonably hardened to withstand future hurricanes. The Commission's efforts will be for naught if the infrastructure built with these funds is destroyed in the next hurricane. But obviously hardening adds costs not contemplated by the CAM. For these reasons, use of the CAM to determine levels of funding is not appropriate here, and the Commission should consider distributing Stage 2 funds through an RFP process.

C. The FCC Should Adjust Cost Thresholds to Ensure Funding of Comparable Service, Including for Areas That Have Never Been Served

Given the CAM's inapplicability to Puerto Rico, high-cost thresholds derived from the CAM cannot be trusted to accurately reflect the average cost per location in Puerto Rico. High-cost thresholds must be higher for the Uniendo a Puerto Rico Fund, in order to direct as much funding to rural areas of Puerto Rico as possible to bring service to locations that received little to no service prior to the hurricanes. The Board reiterates that a negotiated RFP process would likely afford more flexibility in less time for determining the appropriate subsidy for the geographic area.

Additionally, the Uniendo a Puerto Rico Fund must contend with competing priorities: restoring service throughout Puerto Rico and bringing connectivity where no service previously

²⁵ Comments of Puerto Rico Telephone Company, Inc., WC Docket No. 10-90 (filed Sep. 12, 2013), at 12.

existed. The Commission noted this tension, asking if it should lower high-cost thresholds to revise the CAM's assumptions toward Puerto Rico's take rates and average revenues per subscriber in the wake of the hurricanes, or if it should raise high-cost thresholds in order to direct support to rural areas that received no service prior to the hurricanes. The Board advises that the Commission prioritize funding rural areas which received no service prior to the hurricanes over restoring service throughout Puerto Rico. Puerto Rico's providers do not require much incentive to repair their existing networks; it is in their interest to restore service in areas they previously served. However, rural areas which did not have service prior to the hurricanes are highly likely to continue without service unless the Commission can create incentives for carriers to deploy their networks to those high-cost areas. If the Commission developed an RFP framework to distribute Stage 2 funding, it could assign a higher score to applications that offer to serve these areas, thus creating an incentive for providers to deploy their equipment and facilities.

D. The FCC Should Establish Performance Criteria and Deployment Milestones Similar to Those Established for CAF II and Mobility Fund II Winning Bidders

The Board agrees that, regardless of the method used to select the recipient of Stage 2 funds, successful recipients should be required to meet the minimum specific performance criteria proposed in the Notice. Thus, wireline recipients should be required to provide at a minimum 10/1 Mbps, round-trip latency of no greater than 100 milliseconds, and a minimum usage allowance of the higher of 170 GB per month or one that reflects the average usage of an average consumer.²⁶ Puerto Rico's consumers should be entitled to receive the same minimum broadband service levels as provided in the CAF II auction process. Thus, carriers should be required to meet the same

²⁶ Notice, ¶ 60.

minimum deployment standards provided in the CAF II auction.²⁷ Notwithstanding, the Commission should use some flexibility in enforcing this standard to recognize the difficult circumstances Puerto Rico broadband providers face in restoring and hardening their networks and expanding service, where appropriate.

The Board would like to see the speed of service raised to 25/3 Mbps, as with the rest of the United States, but establishing this level of service as a minimum in this proceeding creates a risk that existing carriers could not fully restore all geographic areas in Puerto Rico. However, if the costs to restore facilities to provide 25/3 Mbps are roughly equivalent, to the costs of installing those capable of providing 10/1 Mbps, the Commission should encourage carriers to concentrate their efforts to restore facilities capable of providing broadband service at the higher speed, which is the standard the Commission has established for the rest of the country.²⁸

For wireless recipients, the carrier should at, a minimum, be required to fully restore service to the same level available prior to the 2017 hurricane season. Since the additional funds are targeted to restoration, such a minimum requirement is reasonable. Funds should, however, be targeted to meet the highest level of service available today, which is 4G LTE.²⁹ The minimum requirements should reflect, to the extent possible, the same obligations as auction winners of Mobility Fund II support.

The Board also agrees with the Commission's proposal regarding deployment milestones. The Commission proposes to require that recipients deploy "at least 40 percent of locations after the third year of support, at least 60 percent after the fourth, at least 80 percent after the fifth, and

²⁷ Notice, ¶ 63.

²⁸ *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 5949, 5980-86, ¶¶ 91-101 (2016).

²⁹ Notice, ¶ 85.

100 percent after the sixth year of support.”³⁰ The Board recommends the Commission draw from the penalties established by the CAF Rate-of-Return Order to ensure providers hit their deployment milestones. The Rate-of-Return Order required ETCs to certify that they met their deployment obligations at the time of its annual certifications; failure to file by the given deadline resulted in a reduction in support equivalent to seven days of support for the first week, and a further reduction on a pro-rata daily basis equivalent to the period of non-compliance, plus the seven-day reduction.³¹ The Board believes adopting these deployment milestones and penalties will be sufficient to ensure compliance among funding recipients. If the Commission chooses to adopt a negotiated RFP approach, these accountability measures could easily be imported into the conditions for the award.

E. The FCC Should Condition Support for Funded Locations on a Requirement That Winning Bidders Serve All Locations, Not Just Those Funded

If the Commission chooses to implement its competitive proposal process, the Board agrees with the Commission’s proposition to require winning bidders to serve all locations in order to ensure service to high-cost rural locations that had no service prior to the hurricanes. The Board has frequently advocated that more support is necessary for rural parts of Puerto Rico so as to narrow the broadband availability gap. Allowing successful recipients to serve only funded locations risks exacerbating the digital divide in Puerto Rico, penalizing those rural locations with little to no infrastructure that will be more costly for carriers to restore and provide service. The funding mechanism creates an opportunity to extend comparable service to the unserved and underserved, and the Commission should seize it.

³⁰ Notice, ¶ 63.

³¹ 47 C.F.R. § 54.316(c)(1); *Connect America Fund et al.*, Report and Order et al., 31 FCC Rcd 3087, 3101, ¶ 215 (2016).

The Board understands why the Commission might want to limit the use of additional funding to those locations that still have not been restored.³² In these circumstances, however, the Board believes that restoration efforts are at various stages of completion, though some areas were technically designated as “restored.” In addition, such a restriction would be very hard to administer because the Commission lacks detailed knowledge about the state of facility deployment and reconstruction, which changes daily. Therefore, the Commission should instead provide funding on an island-wide basis, but focus carrier efforts through establishment of a minimum number of locations to be served at the established service parameters.

F. Participants in the Fund Should Be Required to Improve the Resiliency of Their Equipment and Facilities

The Board agrees with the Commission’s interest in making Puerto Rico’s telecommunications infrastructure more resilient and “storm hardened.”³³ Network resiliency represents another criterion that the Commission could give additional weight to in an RFP process. The Uniendo a Puerto Rico Fund represents more than another stream of funding—it is an investment in the development of this nation’s infrastructure, and it must be carefully safeguarded. It is imperative that the carriers that serve Puerto Rico, not only restore service following the devastation of the 2017 hurricanes, but build networks that can endure the hurricanes that will inevitably strike in the coming years.

With regard to specific asset hardening measures, the Board has several recommendations. Since a significant portion of Puerto Rico’s fiber is above-ground, the Board recommends the Commission prioritize trenching or similar measures to protect the last mile. In addition to protecting infrastructure from storms, trenching or other similar measures will protect against

³² Notice, ¶¶ 49, 59.

³³ Notice, ¶ 91.

negligent post-disaster cleanup efforts. Puerto Rico suffered several additional outages as a result of cleanup efforts accidentally severing connections while clearing felled branches. The Board also recommends deploying dual-feeder lines, to ensure that if one station goes down during a disaster, service may continue from a backup source. The Board is currently in the process of mapping Puerto Rico's infrastructure to identify where redundancy exists and where links to backup sources of power can be established. The Board recommends that recipients be required to maintain resources sufficient to provide backup power for at least one week. Each of these measures could be incorporated into an RFP process and given special weight to ensure that proposals adopt storm hardening measures that will protect critical assets for the long term.

The Commission should also craft accountability measures that would allow the Commission to track recovery efforts and monitor construction and access issues. Under the Commission's existing framework, carriers may provide information about the status of their infrastructure via the Disaster Information Reporting System (DIRS). This should not be a voluntary system as applied to the Uniendo a Puerto Rico Fund. The Board believes that carriers should be required to participate in DIRS as a condition to receiving funding pursuant to this proceeding.

VII. CONCLUSION

The Board strongly supports the Commission's proposal to dedicate additional funds to restore communications networks in Puerto Rico. The Uniendo a Puerto Rico Fund represents a great opportunity for Puerto Rico not only to rebuild, but also to ensure its communications networks provide sufficient, robust and comparable service to all areas of the island. The Board offers its support to this endeavor, and recommends that the Commission take advantage of the Board's institutional wisdom and expertise so these funds may be targeted to have the greatest

impact possible. While these funds would enable important progress toward restoring service and rebuilding Puerto Rico's telecommunications infrastructure, more support will be needed to complete the process. Accordingly, the Board respectfully urges the Commission to look for opportunities to provide more funding to Puerto Rico to ensure sufficient connectivity is restored throughout the entire island and its resiliency is sufficient to weather future hurricanes.

Respectfully Submitted,

/s/ Sandra Torres López
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