

Testimony in Commissioner Starks' Field Hearing in Puerto Rico
School of Law, University of Puerto Rico
February 21, 2020

Good afternoon.

It is a real pleasure to be here. Better understanding the impact Hurricanes Irma and María had on Puerto Rico's telecommunications industry—and its infrastructure in general—is of crucial importance for future disaster response and preparedness. This, because true resiliency not only requires that service providers elaborate comprehensive disaster response plans and implement them, but also for the Federal Communications Commission ("FCC") to have a firm grasp of how the telecommunications industry operates in Puerto Rico. Especially, during times of emergency and distress.

For this reason, I want to thank Commissioner Starks for his visit, as well as for the important work he has done to ensure that Puerto Rico is accurately represented within the FCC, and receives adequate amounts of federal government funding as part of Hurricane Irma and María's recovery. The Uniendo a Puerto Rico Fund, for instance—of which I know Commissioner Starks has been an instrumental part—will go a long way towards ensuring that the Island's telecommunications industry is enfranchised, competitive and up to par with that of the United States. The FCC has done an outstanding job outlining a path to recovery and growth in its Stage 2 Uniendo a Puerto Rico Fund Order, and for this I am very thankful.

This being said, I would like to use my time to share with you the lessons Liberty Cablevision of Puerto Rico LLC ("Liberty" or "LCPR") learned as part of its recovery from and response to Hurricanes Irma and María.

Our network was absolutely destroyed by the hurricanes. On September 21, 2017 we had a total of *zero* subscribers. Within five months, however—by March 2018—we had restored 75% of our network and replaced 7,000 poles, 1,300 miles of fiber and 3,728 miles of coaxial cable. By June 2018, the vast majority of our network had been restored, and we had expended \$142 million of our own capital in recovery.

After the natural disaster, our immediate priority were our employees. For this reason, we organized an Employee Assistance Program, which assessed and addressed our employees' material and financial losses. Once we had an understanding of their situation, we strived to cover all of their basic needs and provided them with bottled water, food and batteries, among other material and emotional support. We opted to not lay off any of our employees, despite the financial impact the hurricanes had. Instead, we reassigned employees and revised their duties and functions, so that they could continue to be productive. For example, our Sales Employees served as liaisons with the Puerto Rico Electric Power Authority ("PREPA") throughout the recovery.

Our response to Hurricanes Irma and María was not limited to the restoration of facilities or the wellbeing of employees. After the hurricanes, Liberty set up a Wi-Fi Tour across the Island, which provided satellite Wi-Fi Internet connection to citizens living in 35 of the hardest-hit communities in Puerto Rico, providing over 25,000 access sessions and 36,895 hot meals. Similarly, through Liberty's volunteer program "Helping Hands", more than one hundred

employees—visited 18 communities and delivered 5,500 meals, 1,240 food bags, 15,700 water bottles, and 800 juice bottles among many other goods.

You will probably ask how was it possible for us to recover so quickly.

The answer to this question is a combination of resoluteness, very hard work and a common purpose. We were fortunate to have both, the absolute and consistent support of our parent company, Liberty Latin America Ltd. (“LLA”), which contributed to recovery with both human and monetary resources, as well as an internal cultural organization that provided for committed and engaged employees willing to work day and night to reconnect Puerto Rico within the shortest possible period of time. And so we did.

Similarly, as part of Stage 1 of the Uniendo a Puerto Rico Fund, Liberty received a total of \$11 million, which it used to offset a portion of the \$142 million it had already invested in reconstruction efforts, as well as rebuilding 11,500 homes passed.

Hurricanes Irma and María provided for a significant amount of lessons learned. The experience of hardship demonstrated the importance of an updated disaster recovery plan. As such, Liberty, along with LLA, developed an LLA-wide Disaster Recovery Plan. This Disaster Recovery Plan has already been put to the test on several occasions. For instance, LLA’s Disaster Recovery Plan proved effective when Hurricane Dorian threatened several of its Caribbean markets, and finally struck The Bahamas.

After Hurricanes Irma and María, Liberty also entered into agreements with suppliers and providers in order to ensure business continuity during emergency situations. Specifically, Liberty drafted agreements so as to provide for the availability of materials and labor during emergency response. Similarly, as of mid-2019 all of Liberty’s new build has exclusively consisted of Fiber to the Home (“FTTH”), which is not dependent on PREPA’s electric power.

Perhaps most importantly, Hurricanes Irma and María instilled us with a collective understanding of the telecommunications industry in Puerto Rico. The hurricanes made evident that, in order to effectively respond to emergencies, the government and the industry had to actively cooperate and the regulators as the service providers had to collaborate and look after each other. The months after the hurricane, telecommunication engineers and other public and private officials met almost daily at the Puerto Rico Convention Center to coordinate efforts on the ground. In addition, the providers allowed unrestricted roaming to improve our residents communication access.

More than two years have passed since Hurricanes Irma and María and Liberty’s recovery has cemented its solid position in Puerto Rico’s telecommunications industry. As of December 31, 2019 Liberty Puerto Rico operates with a revenue of \$404 million a year, and counts with 1.1 million homes passed and 785,100 revenue generating units (“RGUs”) in the Island. It proudly belongs to the LLA family of companies, which is present in over 20 consumer markets, 30 business markets (“B2B”), owns a subsea network connecting over 40 markets and has deployed over 50,000km of fiber optic cable. LLA counts with 7.4 million homes passed, 6.0 million RGUs and \$3.9 billion in revenue, to which Liberty proudly contributes.

Even though Liberty Puerto Rico successfully recovered from Hurricanes Irma and María, hurricanes will always be a serious threat in the Caribbean Basin. More recently, however, hundreds of earthquakes and tremors have struck the southern portion of Puerto Rico, and put the telecommunications industry's emergency preparedness to the test. The biggest of these earthquakes struck on January 7, 2020 and had a magnitude of 6.4.

Liberty once again excelled in its response to this emergency. The earthquakes did not cause any material damages to its strengthened infrastructure, and the implementation of lessons learned during the aftermath of Hurricanes Irma and María provided for a swift reaction. Additionally, two days after the 6.4 earthquake struck, Liberty and Liberty Foundation—Liberty's non-profit organization and social responsibility arm—had already started giving relief services in the most affected communities. They provided free Wi-Fi Hotspots, and provided snacks and emergency backpacks to over 2,000 victims. Similarly, Liberty employees donated over 1,400 basic need items, such as toothbrushes, toothpastes, insect repellent, toilet paper and hand sanitizer.

In summary, when we think about improving resiliency of our networks, we should think about it along two different tracks – One track is what can we do to have a more resilient network, resilient to wind for example and resilient to commercial power loss, and the second track is what are the preparations steps we need to take to restore the damaged network fast following a natural disaster. Let's spend a minute on each track.

On the first track, on improving the network resiliency, at Liberty for example we duplicated our generators in all our main hubs across the island, we replaced old infrastructure during our last restoration for example rotten poles, switched to cement poles when possible, we are burying portion of the fiber backbone, which part of a five year plan (Remember that due to the capillarity of the network it will be impossible and not cost efficient in any way to bury all our infrastructure)

On the second track, step one will be the development of a comprehensive disaster recovery plan coordinated between the government and the private sector, that is exercised during a year and not just a word or PowerPoint document, (2) have agreement in place with local and international vendors that can supply material, equipment and labor in a very expedited way, mobilization logistics is a major component of the vendor engagement plan, (3) transparency and visibility in the commercial power recovery plan, and finally a mechanism to escalate to the local government authorities to remove roadblock and frictions to ease the recovery process.

However, it is clear to all of us that this is just not enough. We need to take the time and the efforts to massively improve the resiliency of the power grid. Improving the power grid not only means stabilizing the power generations but improving distribution resiliency by combination of a stronger aerial infrastructure and when possible bury power and telecom distribution. Let's fast forward five to ten years, it is very likely that the 5G infrastructure will require a more distributed approach, like aerial fiber, and use of existing poles, and use of commercial power with limited backup power, and we will back to square one, relying on a grid that is not stable nor resilient.

I hope this brief recollection of our work during the recovery and the lessons we learned serves to demonstrate that—even though the nature of the emergency may change—our

commitment to the telecommunications industry in Puerto Rico and the Puerto Rican people remains the same. We always had an emergency plan, but Hurricanes Irma and Maria certainly taught us a few lessons. Perhaps the most important lesson of those I have already outlined, is that, in order to ensure effective emergency response and recovery, active cooperation between the public and private sectors is crucial. Similarly, that internal cooperation and communication within the telecommunications industry is of the utmost importance. And that, ultimately, the will of the people- and here in Puerto Rico there is no shortage of dedicated, hard working and motivated people - is ultimately what drives success. We could not have achieved the response, recovery and growth without our committed and motivated employees working towards a common purpose.