

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Lifeline and Link Up Reform and Modernization	)	WC Docket No. 11-42
	)	
Telecommunications Carriers Eligible for Universal Service Support	)	WC Docket No. 09-197
	)	
Connect America Fund	)	WC Docket No. 10-90

**Reply Comments of Voqal on Behalf of Mobile Citizen**

About Voqal and Mobile Citizen

These Reply Comments are submitted in response to the Second Further Notice of Proposed Rulemaking, Order on Reconsideration, Second Report and Order, and Memorandum Opinion and Order (“Second FNPRM”) in the above-captioned proceeding by five nonprofit corporations that hold licenses in the Educational Broadband Service (EBS).<sup>1</sup> Though these five organizations are separate, many of their activities are similar or are conducted together, and thus they tended to be confusing to users. Consequently, the five adopted the trade name Voqal in common, and are referred to collectively as Voqal in this pleading.

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<sup>1</sup> These EBS licensees are: Chicago Instructional Technology Foundation (“CITF”), Denver Area Educational Telecommunications Consortium (“DAETC”), Instructional Telecommunications Foundation (“ITF”), Portland Regional Educational Telecommunications Corporation (“PRETC”), and Twin Cities Schools’ Telecommunications Group (“TCSTG”). CITF is licensee of WLX-630, Chicago. DAETC is licensee of WHR-488, Denver. ITF is licensee of WHR-509, Indianapolis; WHR-527, Philadelphia; WHR-512, Sacramento; WHR-511, Kansas City; WLX-699, Salt Lake City; WLX-694, Las Vegas; and WLX-816, Phoenix. PRETC is licensee of WHR-522, Portland, OR. TCSTG is licensee of WHR-487, Minneapolis.

Voqal's most prominent project is known as Mobile Citizen, a wireless broadband service for educational institutions and nonprofit organizations.

As it operates today, Mobile Citizen is made possible because of a series of interrelated excess capacity agreements (referred to herein as the Clearwire Agreement) between EBS licensees Voqal and North American Catholic Educational Programming Foundation (NACEPF) on the one hand; and Clearwire Corporation and one of its subsidiaries on the other. Though portions of this agreement remain proprietary, the bulk of it has been made public by virtue of the fact that Clearwire filed it with the Securities and Exchange Commission because it was considered a material document for securities law purposes.<sup>2</sup> A redacted form of the Clearwire Agreement can be found at the SEC website at:

<http://www.sec.gov/Archives/edgar/data/1285551/000089102007000003/v25599a1exv10w59.txt>.

Pursuant to the Clearwire Agreement, Voqal and NACEPF receive what are referred to as Cost-Free Educational Accounts (CFEAs), which they may give away or resell at very favorable rates to educational institutions, nonprofit organizations, and social welfare agencies. CFEAs are broadband access accounts that have allowed access to the Clearwire broadband services platform. Voqal provides these CFEAs to such entities via our Mobile Citizen project. NACEPF provides these CFEAs to such entities via Mobile Beacon.

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<sup>2</sup> At one time, FCC policies required EBS (then referred to as the Instructional Television Fixed Service or ITFS) excess capacity agreements to be filed with the Commission, and thus they were public documents. The FCC later eliminated the public filing requirement, and now most such agreements are confidential in nature. The principal exceptions to confidentiality are agreements involving governmental EBS licensees, which are often required to be available to the public under various sunshine laws. However, because such agreements are not available in a central location, they can be burdensome to collect.

Though Mobile Citizen serves a wide variety of educational institutions and nonprofit organizations across the country, its services have found widespread adoption among nonprofits whose chief purpose is to reduce the digital divide. Typically, Mobile Citizen enters into agreements to provide CFEAs to nonprofit entities, such as those that the National Digital Inclusion Alliance (NDIA) refers to as community-based organizations.<sup>3</sup> Such community-based nonprofits frequently provide additional services to their users, such as training, sales of low-cost reconditioned computers, technical support, computer repair, etc. In today's environment, a computer has relatively little value unless it is connected to the Internet.

The missions of both Mobile Citizen and community-based nonprofits include the deployment of Mobile Citizen CFEAs---access to the Internet---to low-income end users. These end users typically pay a low monthly fee, which is divided between Mobile Citizen and the community-based organization, thus providing an important way to defray our respective costs. Voqal operates Mobile Citizen strictly as a nonprofit project; it has a history of operating losses every year since its inception, though it ran its first financial surplus in the fiscal year that concluded March 31, 2015. As we will describe, we expect that surplus to be short-lived.

The record in the above-captioned proceeding already contains a considerable amount of information about Mobile Citizen and Mobile Beacon.<sup>4</sup> NDIA described the services provided by Minnesota-based PCs for People, a community-based nonprofit that utilizes accounts from both sources: "At the peak, PCs for People had 14,000

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<sup>3</sup> See the Comments of NDIA, p. 4.

<sup>4</sup> See, for example, the well-crafted Comments of Mobile Beacon, pp. 2-5.

subscriptions via Mobile Beacon and Mobile Citizen. It was the most popular low-cost broadband service in their constituency.”<sup>5</sup>

Sprint acquired Clearwire in mid-2013. Clearwire operates a WiMax-based wireless broadband service that featured unlimited accounts for its users. Sprint has announced that it will complete the shut down of the WiMax network on November 6, 2015.<sup>6</sup> Thereafter, Sprint’s only broadband wireless network will operate using LTE technology.

As of this date, Mobile Citizen has been able to migrate only a few hundred of its current end users to Sprint’s LTE system---a small fraction of the total. We have encountered a series of serious problems as we have endeavored to make this transition, and believe that our relationships with our community-based partner organizations have been damaged as a consequence. Meanwhile many of our former WiMax end users have disconnected, due both to the technical deterioration of the Clearwire network as the WiMax shutdown progresses and the uncertainty about the future. Though we are in no way giving up, we consider the Mobile Citizen project to be under serious threat as a result of these difficulties.

#### Reply Comments of Voqal

##### Expanding EBS Educational Use and Eligibility Rules

Voqal agrees with Sprint that the “homework gap” is a serious problem that must be addressed.<sup>7</sup> We believe that addressing the homework gap and similar educational service should be an EBS use that is recognized under the Commission’s Rules. EBS

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<sup>5</sup> Comments of NDIA, p. 16. See also the Comments of the Benton Foundation and Rural Broadband Policy Group, p. 56.

<sup>6</sup> See <http://www.clear.com/> .

<sup>7</sup> Comments of Sprint Corporation, p. 3.

licensees like Voqal, which are not accredited educational institutions, are required under FCC Rules to provide service to “accredited institutional or governmental organizations...” in order to be eligible to hold EBS licenses.<sup>8</sup> While Voqal agrees that important benefits arise from serving accredited educational entities, our experience is that there are also urgent educational needs that arise in low-income communities, as epitomized by the homework gap. We urge that the Commission revisit both its EBS eligibility and educational service rules to recognize the importance of both informal and formal educational service by EBS licensees.

#### The Vital Nature of Unlimited Data Service to Low Income Users

Voqal agrees with Mobile Beacon that unlimited wireless broadband service from Clearwire has been a vital element of the services we have rendered to date.<sup>9</sup> One accredited educational institution we consulted lends wireless broadband hotspots to students just as a library loans books. Its rule-of-thumb is that the average hotspot borrower consumes one GB of data per hour of use. In this context, limiting or throttling service at a small number of GB per month is clearly unsuitable.

The same considerations come into play with respect to lifeline services to low-income families. According to Mobile Citizen’s community-based nonprofit partners, such users typically access the Internet from their home computers, not smartphones. Computer data consumption, on average, is far greater than the consumption from mobile devices. If we are indeed to provide first class broadband service to low-income people, it cannot be limited to the relatively low quantities that are characteristic of cellphone data plans.

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<sup>8</sup> Section 27.1201(a)(3).

<sup>9</sup> Comments of Mobile Beacon, p. 6.

## EBS Rules and Their Effect on Public Service by EBS Licensees

The Second FNPRM asks how best to utilize licensed bands such as EBS for the purpose of providing broadband service to low-income consumers. In its comments, Mobile Beacon refers to FCC Rule 27.1214(b)(1) which allows and governs the leasing of EBS capacity and asks whether this rule, designed to ensure the use of EBS for educational purposes, is satisfying its purpose.<sup>10</sup> Mobile Citizen believes that, in practice, Rule 27.1214(b)(1) is not implemented in a manner that guards the primary educational use of EBS spectrum. In short, EBS is not currently living up to its envisioned potential as a force in the development and support of education---a limitation that also restricts how EBS can serve low income consumers, as we described above.

While EBS capacity leases are now subject to the Commission's Secondary Market Rules,<sup>11</sup> there have been and remain several restrictions on leasing EBS capacity designed to ensure that EBS capacity leasing furthers the primary educational use of EBS spectrum.<sup>12</sup> As explained more fully below, FCC Rules require that the licensee of leased EBS spectrum reserve at least 5% of the capacity of that spectrum for the licensee's own educational uses (the "Reservation Requirement")<sup>13</sup> and require that the EBS licensee use the EBS spectrum at least 20 hours per leased channel per week for educational purposes (the "Educational Use Requirement"). Because an EBS license most commonly

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<sup>10</sup> *Id.*, p. 7: "The Commission could evaluate whether 5% of the capacity is sufficient to accomplish the FCC's vision for the utilization of EBS given the rising demand for broadband service. Alternatively, the Commission could shift this requirement from being a 'holdback requirement' to becoming an active deployment requirement."

<sup>11</sup> These Rules are codified within Rules 1.9001-1.9080. EBS spectrum leasing pre-dates the existence of the FCC's Secondary Market Rules; it was previously governed by the service rules of the Instructional Television Fixed Service (ITFS), as EBS was then known, in Part 74 of the Commission's Rules.

<sup>12</sup> *Report and Order and Further Notice of Proposed Rulemaking*, in WT Docket No. 03-66, FCC 04-135, at ¶181 (2004).

<sup>13</sup> Rule 27.1203(b) states, in pertinent part, that "Educational Broadband Service stations are intended primarily through video, data, or voice transmissions to further the educational mission of accredited public and private schools, colleges and universities ...."

authorizes four channels,<sup>14</sup> a typical EBS excess capacity lease must, at bare minimum, provide for the educational use of the EBS spectrum by the EBS licensee for 80 hours per week and provide that at least 5% of the “capacity” of the EBS channels be withheld from lease and reserved for the use of the EBS licensee. This “capacity” reservation for a four-channel EBS license could be defined as 1.125 MHz of capacity (0.5 x 22.5 MHz) or could be defined at 5% of the engineered capacity of the channels within the lessee’s network if the reserved capacity “rides” within the lessee’s network and is not separately identified and available without restraint to the EBS licensee. The Reservation Requirement and the Educational Use Requirement are codified in FCC Rule 27.1214(b)(1).

Though there are a handful of cases in which EBS licensees build their own wireless networks and provide meritorious service directly to the public,<sup>15</sup> the bulk of EBS spectrum is leased to a commercial operator in a symbiotic relationship in which the operator provides funding and other benefits that licensees can use to fulfill their educational mission.<sup>16</sup> In most cases today, that commercial operator is a subsidiary of Sprint.

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<sup>14</sup> Rule 27. 1203(b) and (c) defines the types of educational programming for which EBS is intended.

<sup>15</sup> See, for instance, the Comments of NDIA, pp. 14-15, for a discussion of services provided by Albemarle County Public Schools in a portion of Virginia.

<sup>16</sup> “Furthermore, it is well established that revenue from leasing to commercial interests has, in many instances, effectively funded and financed ITFS buildout and operations. The Commission has always considered the leasing of excess capacity a legitimate source of funding for the educational mission, and has taken numerous steps over the years to facilitate and encourage these secondary market transactions.” *Report and Order and Further Notice of Proposed Rulemaking*, in WT Docket No. 03-66, FCC 04-135, at ¶157 (2004).

The Reservation Requirement and the Educational Use Requirement of Rule 27.1214(b)(1) are now convoluted and out of date.<sup>17</sup> This Rule section separates the (at times substantial) amount of capacity that an EBS licensee must reserve for its own use from the often much lower amount that it has to deploy for public service purposes.

The Reservation Requirement is described in Rule 27.1214(b)(1) as follows: “The licensee must reserve a minimum of 5% of the capacity of its channels for educational uses....” While 5% of the capacity of EBS systems will vary greatly according to the density of the network build, it can be substantial, especially in urban networks where the EBS frequencies are used in many cell sites.

The Educational Use Requirement of Rule 27.1214(b)(1) dates back to the time when EBS was the Instructional Television Fixed Service and educational requirements were based upon the number of hours that video programs were transmitted: “...the licensee must provide at least 20 hours per licensed channel per week of EBS educational usage.” It is murky, at best, as to how such a requirement works in the age of wireless broadband data.

Because the content of most excess capacity agreements is kept secret, it is hard to document how individual EBS licensees put these FCC Rules into practice. Based upon limited public information, it does not appear that they generally obtain educational benefits that approach those of the Clearwire Agreement involving Voqal and NACEPF.

One of the few complete EBS spectrum agreements filed with the Commission was submitted in connection with a January, 2013 Petition to Deny submitted in IB Docket No. 12-243---the then-proposed acquisition of Sprint Nextel Corporation by

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<sup>17</sup> The Reservation Requirement was adopted in 1998 in the *Report and Order* in MM Docket No. 97-217, FCC 98-231 (1998). The Educational Use Requirement dates from 1983, when the spectrum was used almost solely for analog video programming.

Softbank---by The Consortium for Public Education and the Roman Catholic Diocese of Erie, Pennsylvania (“Consortium Petition”).<sup>18</sup> That pleading included a full copy of what the petitioners described as a 2010 Educational Broadband Service Long-Term De Facto Lease Agreement governing EBS stations WLX226 and WLX227, Tampa between the School Board of Pinellas County Florida and a Clearwire subsidiary (“Pinellas Agreement”).<sup>19</sup> That document is attached hereto as the first section of Exhibit I.

In the case of the Pinellas Agreement, the holdback requirement is embodied by Section 5(b), which contains the following language: “The term ‘Licensee’s Reserved Capacity’ shall mean the capacity on the Channels that is required to be set aside for Licensee’s use pursuant to FCC Rules, as the same may change from time to time... To the extent that Licensee’s Reserved Capacity is determined as a percentage or portion of the digital capacity on the Channels, such capacity will be determined by Clearwire in accordance with the processes generally used by it to determine capacity use.”

The deployment-related benefits of the Pinellas Agreement are set forth in Section 7(a), parts of which state: “After commercial launch by Clearwire of its wireless services in the Market, Licensee may request at no cost to Licensee, via submission of an Order Form (as defined below), wireless broadband services and associated Internet Access Equipment, if any, for Permitted End Users that are located within Clearwire’s then-serviceable area of the Wireless System...<sup>20</sup> Such wireless services will be specified by Licensee and will be among Clearwire’s standard retail service offerings in the Market

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<sup>18</sup> The Consortium Petition made a number of sweeping allegations about EBS excess capacity practices that Voqal regards as unsubstantiated, and, in fact, often erroneous. We are not here endorsing the overall conclusions advanced by the Consortium Petition, but rather refer exclusively to the terms of the Pinellas Agreement, as it is one of the few readily available recent EBS contracts.

<sup>19</sup> Consortium Petition, Exhibit 2.

<sup>20</sup> “‘Permitted End Users’ means Licensee itself and any educational institution or not-for-profit organization or site in the Market with whom Licensee is working in furtherance of its educational goals.” Pinellas Agreement, Section 7(b).

with a value *not to exceed the amounts per month set forth on the attached Schedule 2(a)* (“Service Credits”)...” [Emphasis added.] Thus, to meet the Educational Use Requirement, the licensee has to use Service Credits to buy accounts on the Clearwire system.

Schedule 2(a) of the Pinellas Agreement specifies service credits in a monthly amount of \$1,000, with that sum increasing 3% annually for the expected 30-year term of the agreement. Clearwire’s standard commercial offering costs about \$50 per month, excluding the expense of end-user equipment (e.g., wireless modems). Even ignoring the need to purchase end-user equipment, the Pinellas Agreement would provide service to only about 20 users. This quantity is insufficient to have a significant impact either on education or on the digital divide.

A second publicly-available EBS capacity agreement is the 2015 Educational Broadband Service Long-Term De Facto Lease Agreement between the School Board of Broward County Florida and Sprint Spectrum, LP, governing EBS stations KTZ22 and KLC80, both located in South Florida (“Broward Agreement”).<sup>21</sup>

The Broward Agreement is similar to the Pinellas Agreement in certain ways, and different in other respects. One difference is that the Broward Agreement is much more lucrative for the licensee. It entails an upfront payment from Sprint to the licensee in the amount of \$7.9 million and further monthly payments of \$199,500 per month.<sup>22</sup>

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<sup>21</sup> The Broward Agreement is attached hereto as the second part of Exhibit I. Though it is labeled “SPRINT CONFIDENTIAL AND PROPRIETARY INFORMATION,” it is in fact a public document, available online at: [http://bcpsagenda.browardschools.com/agenda/01006/Item%20II-1%20%2817099%29/SUPP\\_DOCS/Exhibits/Doc4.pdf](http://bcpsagenda.browardschools.com/agenda/01006/Item%20II-1%20%2817099%29/SUPP_DOCS/Exhibits/Doc4.pdf).

<sup>22</sup> Broward Agreement, Sections 3(a) and 3(c), pp. 3-4. This monthly amount is subject to pro-rata increase or decrease as a result of changes in the amount of Sprint Capacity. See Broward Agreement, Section 3(b).

Broward County Schools operate a highly-regarded educational video service known as BECON.<sup>23</sup> \$1.8 million of the upfront payment is reserved for capital costs to convert BECON to IPTV. A further \$1 million payment is due to the licensee for BECON capital conversion costs in connection with Sprint’s taking over the EBS systems’ mid-band channels at a future time.<sup>24</sup>

The Broward Agreement’s language governing the educational holdback requirement is essentially identical to that contained in the Pinellas Agreement, basing such on then-current FCC Rules and allowing any capacity percentage to be determined by Sprint in accordance with the “processes generally used by it to determine capacity use.”<sup>25</sup>

The deployment-related benefits of the Broward Agreement are set forth in Section 8, which states in part: “Sprint shall provide Licensee with a monthly Service Credit (as defined below) to assist it with its provision of educational services to support Licensee’s educational mission and to help the Licensee meet educational usage obligations imposed by the FCC.” The Broward Agreement provides for a Service Credit in the amount of \$8,500 per month---\$4,250 per EBS system covered by the agreement---which “may be used to purchase Products and Services generally offered in the Markets, in such type and amount as Licensee shall determine, at the then commercially available rates...”<sup>26</sup>

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<sup>23</sup> See <http://www.broward.k12.fl.us/BECON/> .

<sup>24</sup> Broward Agreement, Section 3(e), p. 4.

<sup>25</sup> *Id.*, Section 6(b), p. 6.

<sup>26</sup> *Id.*, Section 8(a), p. 7. Note also the language in this section that states that the “...rates for any Products or Services provided to Licensee will not be at a level that will cause the rates under any agreements with the U.S. General Services Administration, or any similar agreement with any governmental or other entity, to be altered.” (Broward Agreement, p. 8). Section 8(g) states that “Sprint will work with Licensee to identify such additional discounts and marketing promotions and special offers...” though “while Sprint

Though the Broward Agreement Service Credit is higher than that specified in the Pinellas Agreement, Sprint prices its broadband services differently than Clearwire does. For example, according to the Sprint website, it offers hotspot service of 30 GB per month at \$110.00.<sup>27</sup> If a user exceeds 30 GB in a billing period, data consumption above that amount costs \$50.00 per additional GB. Assuming usage of 30 GB monthly or less per hotspot, \$8,500 would pay for service to about 80 users (excluding equipment costs). Assuming usage of 100 GB monthly, this sum would pay for service to only two users.

One may be tempted to view the paucity of the accounts in the context of the Reservation Requirement as of little concern because licensees also have a significant reservoir of EBS capacity in the 5% of its EBS channel capacity within this reserve. While we cannot provide confirmation of the extent of the practice, it is our understanding that a wireless broadband operator does not separate the 5% reserved to the educator by frequency. Instead, the operator leases all of the spectrum except for the 5% that “rides” on the operator’s network, though it is not defined or identifiable. In short, the operator really leases 100% of the EBS capacity and allows the EBS licensee to access the undefined “5%” through the aforementioned service credits, which rarely cover the cost of access to more than a small part of the “reserved” 5%. Put another way, for an EBS licensee to access and use its “reserved” capacity, the licensee must purchase commercial accounts from its operator in a sufficient number to use that 5% and at retail rates. In effect, the Educational Reservation is but a mirage in this apparently common

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may allow use of such discounts in conjunction with service credits, it is under no obligation to do so.”  
(*Id.*).

<sup>27</sup> See:

[http://shop.sprint.com/mysprint/shop/plan/plan\\_wall.jsp?tabId=pt\\_data\\_plans\\_tab&flow=AAL&planFamilyType=Individual#!/](http://shop.sprint.com/mysprint/shop/plan/plan_wall.jsp?tabId=pt_data_plans_tab&flow=AAL&planFamilyType=Individual#!/). Click on 30 GB to see pricing.

scenario, and EBS licensees are deprived of the opportunity of allocating more than a small amount of their spectrum to improving and supporting education.

This problem should be resolved. One solution is for the Commission to interpret the minimum 5% capacity reservation to require that, if it rides within the lessee's communications system, then the lessee must provide the EBS licensee with unfettered access to that 5%. That will require that the lessee both report to the EBS licensee the amount of capacity which equals 5% (or such greater percentage as the EBS licensee has reserved) and to provide that access without charge for the communications link, with the licensee responsible for only the cost of end-user devices.<sup>28</sup> This interpretation is fair to operators, who have impermissibly enjoyed access to the 5% reservation with leases that provide that the 5% rides on the operators' network.

Aside from this interpretation, it would be helpful if the educational use rules were updated. In our example, the defective nature of the Pinellas and Broward Agreements is traceable to the outdated requirements of Rule 27.1214(b)(1). The requirement for an EBS licensee to use its capacity for 20 hours per channel per week is met by just deploying a single account and modem for a duty cycle of 80 hours per week. The FCC has historically focused upon ensuring that EBS transmission capacity is "substantially used" for its primary educational purposes. While 20 hours per channel per week is a lot of use when the four EBS channels covered by a license are used in analog video operations (which is the context of this required use), that level of use is meaningless in a digital world.

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<sup>28</sup> In many instances, the end-user devices can only be procured through the lessee/carrier because of access to the carrier's network requires the use of proprietary codes or algorithms. The devices charge would have to be limited to a charge that the operator charges to retail customers, or a charge calculated to provide a return of the cost of the device plus reasonable profit.

Moreover, a minimum 5% reserve may make sense when it is truly reserved and available for use by the EBS licensee, but it is not real when it rides on the lessee's network and most of it is not available to the EBS licensee. We urge the Commission to modernize its Rules and to convert the 5% capacity "holdback" requirement into an active deployment requirement of 5%.<sup>29</sup>

We note the Notice of Ex Parte Presentation dated September 25, 2015 filed in the above-captioned docket by Todd Gray of Gray Miller Persh, LLP, counsel to the National EBS Association ("NEBSA"). This notice reports a phone call in which Mr. Gray and Edwin N. Lavergne (representing the Catholic Technology Network, "CTN") urged Commission staff to "move forward with a Further Notice of Proposed Rulemaking in WT Docket No. 03-66 focusing only on licensing of remaining EBS 'white space' throughout the country, because incorporation of other issues (such as changes to EBS educational reservation requirements as was suggested by one party in the lifeline reform docket) would undoubtedly delay the resolution of the proceeding." This mention apparently refers to the Mobile Beacon comments in the above-captioned proceeding.

Voqal agrees that the allocation of EBS "white space" (unallocated EBS frequencies in significant parts of the country) is an urgent need. Indeed, there has been no generally-open opportunity to apply for EBS spectrum in almost 20 years. We express no opinion as to the best proceeding to revisit the EBS Rules for the benefit of education and reducing the digital divide. However, we urge that the Commission revisit these Rules for both purposes in the near future.

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<sup>29</sup> Others will point out, and we acknowledge, that such a rule change will pose hardships for licensees in the position of the School Board of Pinellas County Florida, as they will have to find means to meet stepped-up educational requirements with only a low level of service credits. We will leave a full discussion of how to implement a stronger deployment regime to a proceeding that focuses chiefly on EBS rules.

Respectfully submitted,

VOQAL

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