Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands Transforming the 2.5 GHz Band	WT Docket No. 18-120

JOINT COMMENTS
NATIONAL EBS ASSOCIATION AND CATHOLIC TECHNOLOGY NETWORK

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Summary

The National EBS Association and the Catholic Technology Network represent the interests of Educational Broadband Service (EBS) licensees in the United States. In this proceeding, the Commission proposes options to license unassigned EBS spectrum and transform the 2.5 GHz band to facilitate more intensive and flexible use of EBS spectrum. While unassigned EBS spectrum should be licensed and some modernization of EBS rules may be warranted, a "transformation" of the band is neither necessary nor in the public interest. EBS does not need *fixing*. It needs *finishing*.

- **Flexible Rules Are Already in Place.** The FCC has already created a flexible regime for EBS that has fostered educational use and a robust secondary market for commercial broadband services. The FCC's forward-looking policies have ensured that commercial wireless carriers have ample spectrum for 5G services. At the same time, these policies have provided private funding and resources for education without reliance on federal assistance or other government funding.

- **Geographic Service Areas Should Be Expanded.** Existing geographic service areas should be expanded to align with those of other wireless services and natural educational boundaries. NEBSA and CTN will support any reasonable expansion as dictated by the operational needs of wireless carriers and the administrative needs of the FCC.

- **New EBS Licenses Should be Issued to New Entities Without Auctions.** New EBS licenses should be issued through a process that avoids auctions. CTN and NEBSA support the Commission's proposal to limit participation in the filing windows to Tribal Nations and local educators who currently do not hold EBS licenses. This will permit the benefits of EBS to extend to a host of new educational entities.

- **Existing Licensees and Services Should Not be Disrupted.** Given the success of the existing EBS regulatory model and the ongoing reliance on that model by educators and wireless carriers, the Commission should ensure that new rules adopted in this proceeding do not disrupt current licensees and leasing arrangements.

- **EBS Should Not be Commercialized.** EBS licenses should not be sold to commercial entities. Licensed EBS spectrum is already being used efficiently for both educational and commercial purposes. There is simply no need to eliminate current EBS eligibility restrictions in order to facilitate more intensive use of the band.

- **Educational Usage Rules Can be Updated.** NEBSA and CTN would support a modernized method of measuring educational usage. However, it has been difficult to develop alternate metrics given the differing uses of EBS spectrum by individual licensees.

- **Lease Term Limits Should be Retained.** The Commission should retain the current 30-year limit on EBS lease terms so that educational licensees have a reasonable opportunity to reevaluate lease terms, benefits, and partner relationships over time.

- **Reasonable Performance and Renewal Requirements Should Apply to EBS.** Performance and renewal standards for newly issued EBS licenses should be the same as those for current licenses. The recently adopted harmonized wireless renewal standards could be applied to EBS with an appropriate safe harbor for licensees meeting EBS substantial service requirements.

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The National EBS Association ("NEBSA") and the Catholic Technology Network ("CTN") submit these comments in response to the above-referenced Notice of Proposed Rulemaking, released May 10, 2018 ("*Notice*").[1]

NEBSA is the professional association for the Educational Broadband Service ("EBS") community, representing PreK-12 and post-secondary schools and other educational nonprofit entities holding EBS licenses. CTN is an association of Roman Catholic archdioceses and dioceses with EBS licenses that operate many of the largest parochial school systems in the United States. Together, NEBSA and CTN have participated in virtually every major proceeding involving EBS and their views have helped frame and shape important policy issues concerning the use of wireless technology in education.

[1] *Transforming the 2.5 GHz Band*, WT Docket No. 18-120, *Notice of Proposed Rulemaking*, FCC 18-59 (May 10, 2018) ("*Notice*"); by order released on June 21, 2018, the Commission extended the comment and reply comment deadlines by 30 days to August 8, 2018 and September 7, 2018, respectively. *Transforming the 2.5 GHz Band,* WT Docket No. 18-120, *Order*, DA 18-647 (June 21, 2018).

I. Introduction.

NEBSA and CTN welcome the Commission's decision to license unassigned EBS spectrum, commonly referred to as EBS white space. The footprint of EBS coverage across the United States has essentially been frozen since 1995. Despite substantial developments over the years in wireless technology, prior refinements to EBS technical and leasing rules, and intensive use of EBS spectrum for both educational and commercial purposes, EBS spectrum has been unavailable to prospective educational users (and commercial lessees) in large areas of the country. For more than a decade, NEBSA and CTN have repeatedly encouraged the Commission to license EBS white space, and have worked collaboratively and proactively with the Commission's Wireless Telecommunications Bureau and Broadband Division, the EBS community, and commercial lessees to suggest appropriate rules that would expand the benefits of EBS to more educational institutions and accelerate the deployment of commercial 4G and 5G wireless networks to more Americans, particularly in rural areas.

As the *Notice* recounts, the Commission, through several actions over the years, has created a flexible regime for EBS that has fostered both educational use and a robust secondary market for commercial broadband services in the 2.5 GHz band.[2] However, in addition to seeking comment on how best to license unassigned EBS spectrum, the *Notice* solicits comment on a variety of other issues with the purported goal of "transforming" the 2.5 GHz band to facilitate more intensive and flexible use of EBS spectrum. Among other things, the Commission asks whether it should eliminate EBS educational use and eligibility requirements and whether there are other ways to restructure the 2.5 GHz band to ensure that it is put to its highest and best use.[3] The Commission

[2] *Notice* at ¶ 10.

[3] *Id.* at ¶¶ 19-22, 58.

also seeks comment on other approaches to transform the band, including the possibility of conducting an EBS incentive auction.[4]

A process for licensing unassigned EBS white space is long overdue, and some modernization of EBS rules may be warranted, but a complete transformation of the 2.5 GHz band is neither necessary nor in the public interest. Some of the questions raised in the *Notice* appear to be grounded on the assumption that *licensed* EBS spectrum is underutilized.[5] This is not the case. Indeed, the suggestion that EBS spectrum is underutilized is puzzling given the billions of dollars invested in the band and the robust and competitive network that Sprint operates using leased EBS spectrum, as well as the educational services provided by EBS licensees to their constituents. The Commission's existing rules already provide EBS licensees and commercial broadband service providers with great flexibility to use the 2.5 GHz band efficiently and for a wide variety of purposes. The band is underutilized only in geographic areas where, due to prior Commission inaction, EBS spectrum never has been licensed.

II. Existing Flexible Use Rules Have Resulted in Widespread and Efficient Use of EBS Spectrum.

In those areas of the country where EBS licenses were issued before the Commission imposed an application freeze in 1995, there is widespread deployment of mobile and fixed wireless services, including in nearly all major metropolitan areas, numerous smaller markets, and some rural areas. Indeed, in areas where it is licensed, the 2.5 GHz band already carries the highest percentage of Sprint's LTE data traffic and provides Sprint with significant additional capacity for

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[4] *Id.* at ¶ 61.

[5] *Id*. at ¶¶ 10, 19, 58.

future growth, particularly for 5G deployments.[6] At the same time, the band is used for a wide variety of educational purposes including, for example, providing thousands of teachers and students in Los Angeles with Sprint-connected iPads, providing Internet connectivity to learning centers and off-the-grid school areas in the San Francisco Bay Area, and providing home and hospital bound students in Florida with mobile hotspots to keep them connected to virtual classes, counselors and online learning resources while coping with health and corrective issues. Other EBS licensees provide mobile hotspots to schools, libraries, nonprofits, and low-income communities across the country in an effort to bridge the digital divide and address the homework gap.

The use of EBS spectrum has been greatly enhanced by unique public-private partnerships that have been forged between educators and commercial operators. Long before the current secondary markets rules were adopted, the Commission encouraged such partnerships on the grounds that a secondary market for EBS spectrum would promote efficient spectrum use and advance the interests of both educators and commercial entities.[7] The Commission also

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[6] *Sprint Corp. 10-K* (May 25, 2018) at 32 ("Sprint believes it is well-positioned with spectrum holdings of more than 160 MHz of 2.5 GHz spectrum in the top 100 markets in the U.S. Sprint's broad spectrum holdings allow us to introduce 5G in parallel with 4G service over the same 2.5 GHz spectrum band, supporting the early introduction of 5G devices without disrupting the capacity needs of our 4G users.").

[7] *Amendment of Parts 2, 21, 74 and 94 of the Commission's Rules and Regulations in Regard to Frequency Allocation to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service*, Gen. Docket No. 80-112, *Report and Order*, 94 FCC 2d 1203, 1249 at ¶ 114 (1983) ("[W]e believe that it is in the public interest to permit [EBS] licensees to lease their excess channel capacity. … As the excess capacity … is put to use serving the public, greater use of the available spectrum should result."). *See also Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, MM Docket 97-217, *Report and Order on Further Reconsideration and Further Notice of Proposed Rulemaking*, 15 FCC Rcd 14566, 14569 at ¶¶ 9-10 (2000) ("We do not believe that there is any contradiction between an [EBS] licensee performing its educational mission and that same licensee securing financial returns from the lease of its excess capacity. In fact, those financial returns can and do provide substantial resources to the [EBS] licensee in the performance of its educational mission.").

encouraged EBS licensees to lease up to 95% of their spectrum for commercial use in an effort to maximize flexibility while at the same time safeguarding the educational purpose of EBS.[8]

In 2004, the Commission took additional steps to maximize the use of EBS by adopting forward-looking rules to reconfigure the 2.5 GHz band to accommodate both fixed and mobile wireless broadband services.[9] The reconfigured band provided even more flexibility to EBS licensees and their commercial lessees.[10]

In a mobile broadband environment, EBS licensees often choose to lease 95% of their spectrum capacity to a commercial operator and then use the operator's network to provide educational services. Educators and operators alike have come to recognize – as the Commission anticipated they would – that this model achieves efficiencies in terms of spectrum utilization, backend requirements and network management. This is especially true in a cellularized and sectorized wireless environment, where greater spectrum efficiencies can be achieved if a single entity can, as permitted by Commission rules, subdivide and combine channels. The benefits and efficiencies of shared networks have been long recognized by the Commission:

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[8] *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, MM Docket No. 97-217, *Report and Order*, 13 FCC Rcd 19112, 19159 at ¶¶ 89-90 (1998) (explaining that the 5% reservation should maximize flexibility for system design to meet varied operator needs and maximize spectrum available for leasing while maintaining sufficient capacity for educational use).

[9] *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, WT Docket No. 03-66, *Report and Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 14165 (2004).

[10] *See, e.g., Fostering Innovation and Investment in the Wireless Communications Market, A National Broadband Plan For Our Future,* Gen. Docket No. 09-157, *Notice of Inquiry*, 24 FCC Rcd 11322, 11328-29 at ¶ 27 (2009) ("The Commission has taken additional steps to make spectrum with incumbent licensees available for new uses. For example, the Commission has repurposed [2.5 GHz] spectrum by modifying technical and service rules to allow incumbents to provide new services or to free up spectrum for additional licensees or users.").

> [T]he creation of superchannels will typically involve the participation of multiple licensees, each of whom will contribute some portion of the combined spectrum. These voluntary spectrum-sharing arrangements will clearly benefit all of the parties, in that it will give all of them the means to communicate at data rates optimal for their particular operations. …. We believe this flexibility to subdivide and combine channels is essential to take maximum advantage [of the 2.5 GHz band] in the years to come. We are therefore adopting our proposals in this regard to permit the maximum possible flexibility … between multiple licensees who wish to share their spectrum and configure their bandwidths in accordance with agreements among themselves.[11]

The Commission's foresight was right on target. Today, EBS licensees can choose to lease a significant portion of their licensed spectrum to commercial wireless service providers and, in exchange, obtain access to advanced broadband services needed for education through the creation of shared networks.[12] Educators use these services not only to deliver broadband access to the classroom and to students lacking broadband access at home, but for a variety of other educational purposes that are permitted under the Commission's existing rules.[13] At the same time, commercial entities obtain the flexibility they need to take full advantage of technological and business opportunities in the marketplace.[14] Indeed, with few exceptions, EBS leases offer

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[11] *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, MM Docket No. 97-217, *Report and Order,* 13 FCC Rcd 19112, 19120 at ¶ 20 (1998).

[12] As noted in the statement of Commissioner Carr, which accompanied the *Notice*, it is estimated that 90 percent of EBS licenses held by educational institutions are leased to other entities.

[13] For example, the University of Maryland uses Sprint devices to provide data transfer connectivity at research facilities, including a drone flight facility, operated at remote locations for security and public safety reasons. Illinois Institute of Technology monitors energy-producing installations throughout its Mies campus utilizing Sprint devices, which continually submit measurements from such equipment as solar panels and wind turbines. The University of Central Florida uses capacity on the Sprint network to provide broadband access for students on University shuttle buses. *See University of Central Florida Expands Student Services Using EBS*, NEBSA Website, https://nebsa.org/index.cfm/ebs-in-action/university-of-central-florida-expands-student-services-using-ebs/ (last visited Aug. 4, 2018).

[14] For example, EBS lease agreements generally permit commercial operators to channel shift or swap, create sub-channels or superchannels, enter into interference coordination arrangements, introduce new transmission sites and technologies, and provide new service offerings.

commercial wireless service providers virtually as many technological and business opportunities as direct licensing, while concurrently supporting the important interests and advancement of education.

In short, the existing EBS regulatory regime is a resounding success – not a past spectrum policy mistake. Through forward-looking regulatory policies, the Commission has already established a framework to ensure that EBS spectrum is available for flexible use. These policies provide commercial wireless carriers, most notably Sprint, with ample spectrum to deploy robust 4G LTE and 5G services serving millions of customers nationwide.[15] They also enable a considerable number of smaller wireless companies to serve smaller markets and rural areas, typically with fixed wireless (Internet access) services.[16]

At the same time, the Commission's policies have facilitated substantial investment in educational services and financial support for educational institutions without reliance on federal assistance or other government funding.[17] More recently, advances in technology and pricing, combined with existing flexible use rules, have made possible emerging educational EBS self-

[15] *See, e.g.*, Kevin Crull, Sprint Chief Strategy Officer, *5G North America,* video posted July 5, 2018, https://www.youtube.com/watch?v=rRkftK9B30w ("Sprint has a treasure trove of 2.5 GHz spectrum, and this is particularly good for 5G. We are very excited about deploying 5G on our 2.5 GHz spectrum.").

[16] According to NEBSA member Select Spectrum, a spectrum marketing and consulting firm active in the EBS band, in addition to Sprint, more than sixty companies currently lease EBS spectrum in connection with their operation of wireless broadband networks.

[17] NEBSA and CTN members report that EBS lease revenues are used to support many diverse educational objectives. These include funding classroom equipment; computers and other devices for students, faculty and staff; providing internet access at home for disadvantaged students; funding training programs for journalism and electronic arts; funding professional development programs for faculty and staff; and outreach efforts for job training, pre-school education and parent engagement.

deployments, which focus on educational and other local community services, especially in areas where commercial service providers have chosen not to construct broadband networks.[18]

The only significant limit on the success of the current EBS licensing, regulatory and leasing model has been the delay – now over two decades – in licensing EBS white space. As a result, the footprint of EBS coverage in the United States has been frozen at the level that existed in 1995. This delay has prevented public-private EBS partnerships from extending to substantial geographic areas in the country, particularly smaller markets and rural areas west of the Mississippi. In addition, the prior failure to license EBS white space, combined with the existing circular geographic service areas of EBS licenses, has resulted in numerous gaps in EBS coverage, most notably east of the Mississippi. These gaps create operational challenges and inefficiencies in areas where EBS spectrum is licensed and deployed.

EBS does not need "fixing." It needs "finishing." It is neither necessary nor wise to "transform" the band by abandoning the current licensing, regulatory and effective secondary markets leasing models. The Commission only needs to finish the task of licensing EBS white space to extend EBS coverage nationwide.

III. Existing EBS Geographic Service Areas Should be Rationalized.

As a first step in extending EBS coverage nationwide, NEBSA and CTN agree with the Commission's proposal to rationalize the geographic service areas ("GSAs") of existing EBS licenses.[19] Due to the unique "radius around a reference point" circular approach used to license EBS spectrum in the past and changes to EBS coverage areas over time, existing GSAs do not

[18] The separate comments filed in this proceeding by Kings County Superintendent of Schools and Northern Michigan University provide extensive information on their self-deployed LTE networks and the remarkable educational and public service benefits generated by those systems.

[19] *Notice* at ¶ 11.

conform to recognized geographic boundaries. In addition, there are many gaps of unlicensed areas between existing GSAs. These areas are left unserved, and due to their size, shape, and adjacency to existing systems, cannot support service deployments on their own. Rationalization of existing GSAs would be helpful operationally and in establishing clear geographic boundaries for newly-issued EBS licenses.

The details of the rationalization process should be driven by the Commission's desire to transition to appropriate licensing boundaries conforming to ULS capabilities and the network operational needs of Sprint and other wireless carriers whose networks utilize the 2.5 GHz band. The process should be simple, automatic, and easily effectuated to avoid disputes requiring time and resource-consuming Commission intervention. Geographically, rationalization might be based on a process of extending GSAs to county boundaries given the alignment of counties with traditional educational services areas. However, NEBSA and CTN will support any reasonable rationalization process, provided that coverage of existing GSAs is not reduced as such reductions would disrupt existing services provided by licensees and their commercial partners.[20]

IV. Priority Filing Windows Should be Used to Issue New EBS Licenses.

NEBSA and CTN support the Commission's proposal to establish local priority filing windows for new EBS licenses that would be issued to rural Tribal Nations and new educational entities,[21] following the completion of the GSA rationalization process discussed above.[22] Tribal

[20] For administrative ease and efficiency, NEBSA and CTN urge the Commission to implement a single, comprehensive automatic rationalization process, which would be applicable to all existing licenses and eliminate the need for a separate priority window for this purpose.

[21] *Notice* at ¶¶ 35-39 and 40-43.

[22] If the Commission implements a single, comprehensive automatic rationalization process as proposed by NEBSA and CTN, there would be no need for a first priority window to further expand existing GSA boundaries as suggested in paragraphs 32-34 of the *Notice*. In that case, there would only need to be two priority filing windows for new licenses – one for Native American Tribes and one for local schools.

Nations and educators have been waiting for decades for the opportunity to apply for new EBS licenses, and establishing these filing windows will serve to extend the success of the current EBS regulatory regime into those areas of the country where EBS licensing opportunities have been unavailable.

With respect to the priority filing window for applications by rural Tribal Nations, NEBSA and CTN take no position at this time as to the details of eligibility, size and nature of newly-licensed areas.[23] We will review with interest the comments of parties with knowledge of the unique needs of Tribal Nations and may provide a further response in reply comments.

With respect to the priority filing window for new educational entities, NEBSA and CTN support the Commission's proposal in paragraph 41 to limit participation to local accredited institutions and governmental organizations engaged in the formal education of enrolled students who currently are not EBS licensees.[24] This is not a position taken lightly, as it means that NEBSA and CTN members generally will not qualify to participate. NEBSA and CTN would naturally be expected to advocate for the right of existing licensees – both schools and nonprofit educational entities – to participate in this filing window. However, NEBSA and CTN understand that many in the education community have long waited for their opportunity to extend the benefits of EBS to their communities, and that it is appropriate to permit them to take maximum advantage of this opportunity. NEBSA and CTN are confident that the existing EBS licensee community will provide support and guidance to enable these new licensees to be successful.

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[23] *Notice* at ¶¶ 36-37.

[24] The types of entities eligible to apply during the filing window process would be more restricted than the entities allowed under the current rules. *See* 47 C.F.R. § 27.1201.

The Commission seeks comment on the requirement that applicants in the priority filing windows for new licenses have a "local presence."[25] The Commission proposes that an applicant should demonstrate that it is "physically located within the license area applied for," citing the *ITFS Local Priority Order*.[26] In that order, the FCC determined that it would regard as "local" those "institutions and organizations that are physically located in the community, or metropolitan area, where service is proposed. For colleges and universities, this would include areas where they have a campus. Educational organizations will generally be regarded as 'local' if the address of the organization's headquarters is located within the area where the facility is sought. Entities created by a state or local government for the purpose of serving formal educational needs will be considered 'local' throughout the area within the government's jurisdiction over which its authority is intended to extend. Educational entities located within a state and created by affiliated educational institutions within that state will be considered 'local' in those areas where the member institutions are located (*e.g.*, Indiana Higher Educational Telecommunications System)."[27] NEBSA and CTN believe that the *ITFS Local Priority Order* continues to offer an appropriate definition of local presence for the purpose of eligibility for new EBS licenses.

NEBSA and CTN are concerned that mutually exclusive applications will pose more of a problem in the local priority filing windows than the Commission appears to anticipate because there likely will be more than one application for many, if not most, EBS licensing opportunities.

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[25] *Notice* at ¶ 29.

[26] *Amendment of Part 74 of the Commission's Rules and Regulations in Regard to the Instructional Television Fixed Service*, MM Docket No. 83-523, *Second Report and Order*, 101 FCC 2d 49 (1985).

[27] *Id*. at 23.

While the law mandates auctions for mutually exclusive applications for new EBS licenses,[28] and auctions could be employed to resolve mutually exclusive applications that are filed during the priority filing windows, most parties do not believe that auctions are the best way to license EBS spectrum among competing educational entities. Indeed, the Commission itself has expressed serious reservations with the notion of auctioning EBS spectrum:

> [M]any educators otherwise eligible for EBS licenses may not be able to participate in competitive bidding for licenses, which the Communications Act would require before the Commission could grant one of multiple pending mutually exclusive applications for an EBS license. For example, public and educational institutions may be constrained from participating in competitive bidding by statutory or institutional constraints, such as mandates regarding budget processes. … Even if there is no absolute bar to an educational institution or non-profit educational organization participating in a spectrum license auction, educators may be reluctant or unable to devote time, personnel and money to such an auction. Given the benefits that EBS can provide to educators, we believe it is appropriate to evaluate potential alternatives to a licensing scheme based upon competitive bidding. …[G]iven various characteristics of eligible EBS licensees that are unique among potential Commission licensees, a licensing mechanism that depends on competitive bidding to assign licenses may not provide many otherwise eligible EBS licensees with a full opportunity to participate.[29]

In order to minimize the potential for mutually exclusive applications and maximize opportunities for new entrants, NEBSA and CTN recommend that within each priority filing window, interested parties be limited to filing for just two EBS channel groups, subject to appropriate attribution rules. This limitation, combined with restricting eligible applicants to

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[28] *See* 47 U.S.C. § 309(j)(1) ("If … mutually exclusive applications are accepted for any initial license …, then, except [for exempted services, which do not include EBS], the Commission shall grant the license … to a qualified applicant through a system of competitive bidding that meets the requirements of this subsection.").

[29] *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, et al.*, WT Docket Nos. 03-66 *et al*., *Second Further Notice of Proposed Rulemaking*, 23 FCC Rcd 5992, 6063 (2008). Even outside of the priority filling windows, auctioning unassigned EBS spectrum is not likely to be a successful endeavor if the goal is substantial participation and the expansion of wireless broadband service to rural areas. The monetary return on EBS auctions is also not likely to be significant.

accredited institutions and governmental organizations engaged in the formal education of enrolled students, will ensure that only local educators with a need for a reasonable amount of spectrum participate in the priority filing windows.

Significantly, the Communications Act does not compel auctions in all instances of new spectrum licensing. Section 309(j)(6)(E) of the Act makes it clear that the general auction requirement does not relieve the Commission of the "obligation in the public interest to continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means to avoid mutual exclusivity in application and licensing proceedings."[30] Given the Commission's consistent findings that the public interest would not be served by requiring educators to compete against each other to obtain EBS licenses through auctions, we urge the Commission to seek alternative licensing strategies to avoid mutually exclusive applications in the priority filing windows.

The Commission suggests one such alternative – a settlement window to allow filers to resolve mutual exclusivity before the Commission accepts any application for a new license.[31] NEBSA and CTN agree that a settlement window could be utilized, by itself or in combination with other alternatives, to minimize the necessity for auctions. The 2014 consensus proposal suggested another such alternative – the use of a "first come, first served" approach.[32] Under this approach, the first eligible application filed in any window for a particular license would be

[30] 47 U.S.C. 309(j)(6)(E).

[31] *Notice* at ¶ 46.

[32] *Ex Parte* Letter from Catholic Technology Network, National EBS Association, Wireless Communications Association International and Hispanic Telecommunications Information Network, Inc., (filed June 6, 2014). *See also ex parte* letters supporting the consensus proposal submitted by Sprint (filed March 15, 2017 and March 27, 2017).

grantable and would "cut off" the filing of any subsequent applications for that license. Thus, there would be no mutually exclusive applications to trigger the auction requirements of Section 309(j).

There is precedent for first come, first served licensing. The approach was adopted by the Commission for geostationary satellite orbit-like space station applications in 2003 to reduce application processing time and expedite the provision of satellite service to the public.[33] A similar approach could be implemented in processing new EBS applications filed in priority filing windows, by granting the first application filed, with timing to be considered down to the millisecond. If more than one application were filed in the same millisecond, the Commission would have the option of dividing the spectrum between the applications to avoid mutual exclusivity, or using a settlement window to permit the parties to resolve their mutual exclusivity. To encourage good faith negotiations, the Commission could dismiss applications if the parties do not reach a resolution, with the attendant loss of that licensing opportunity in that filing window for those applicants. The Commission has used that same approach in connection with processing certain DTV applications, pursuant to Section 73.623(h)(3) of its rules.[34]

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[33] *See Amendment of the Commission's Space Station Licensing Rules and Policies*, IB Docket No. 02-34, *First Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 10760, 10792-10822 (2003). Under this approach, the Commission considers applications in the order in which they are filed, down to the millisecond. If a qualified application is filed, the Commission grants it, thereby cutting off any other application for the same orbital slot. If two grantable applications are filed in the same millisecond, the Commission issues licenses each to operate in half the spectrum at the particular orbit location. The Commission found this approach to be consistent with the Communications Act, including *Ashbacker* requirements. The Commission observed that *Ashbacker* allows it to promulgate regulations limiting the filing rights of competing applicants, and leaves to the Commission's discretion the circumstances under which applications are considered mutually exclusive. 18 FCC Rcd at 10801 notes 226 and 227, citing *Amendment of the Commission's Space Station Licensing Rules and Policies*, IB Docket No. 02-34, *Notice of Proposed Rulemaking*, 17 FCC Rcd 3847 at 3869 (2002). The Commission also noted that it had used the first come, first served for FM radio licenses. 18 FCC Rcd at 10792.

[34] *Freeze on the Filing of Modification Applications to be Lifted Temporarily to Permit Filing of Applications to Expand the Contours of Full Power and Class A Television Stations That Are Not Part of*

Following rationalization and new EBS licensing arising out of the filing windows, the Commission could issue licenses for any remaining unlicensed 2.5 GHz spectrum through auction. Those auctioned licenses could be issued to any entity (including incumbent EBS licensees, other educational organizations, and commercial entities) without restrictions on eligibility or educational reservation and use requirements, to enhance the prospects for success.

V. Current EBS Licensees and Leasing Arrangements Should Not be Disrupted.

Given the success of the existing EBS regulatory model and the ongoing reliance on that model by educators and wireless carriers alike, the Commission should ensure that new rules adopted in this proceeding do not disrupt current licensees and leasing arrangements. There certainly is no reason for the Commission to conduct incentive auctions or take other actions that would disrupt current licensees.[35]

Under existing leasing relationships, educators provide much needed services to students and other constituents using both the funds and services provided under such leases. Any disruption to those arrangements could result in harm to educational institutions and students that rely on such funding and services through multi-year, long-range, budgeting and technology plans.[36] In addition, commercial operators, including Sprint, rely on these leases to deliver advanced broadband services to consumers nationwide. Thus, while NEBSA and CTN support

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the Post Incentive Auction Repack Process, MB Docket No. 16-306, GN Docket No. 12-268, *Public Notice*, DA 17-1033, at ¶ 7 (Oct. 19, 2017).

[35] If the Commission does change its rules in a manner that would affect leasing relationships, existing leases and their bargained-for benefits for both lessors and lessees should be grandfathered and excluded from the reach of such new rules.

[36] EBS licensees report to NEBSA and CTN that negative impacts likely to result from the loss of EBS leasing arrangements would include no longer being able to provide Internet access to disadvantaged students, struggling to maintain school computer labs and network equipment, losing video curriculum subscriptions, closing of learning centers, increasing distance learning enrollment fees charged to students, canceling hotspots paid from the school technology budgets, reducing school personnel and equipment, and losing support for strategic initiatives related to growth, innovation and entrepreneurship.

the Commission's goal of ensuring that EBS white space is licensed in a manner that expands the benefits and use of the 2.5 GHz spectrum band, fulfilling that goal should not harm current licensees and lessees or disrupt their services.

VI. EBS Licenses Should Not be Sold to Commercial Entities.

The Commission proposes to eliminate EBS eligibility requirements so that existing EBS licensees could assign or transfer their licenses to commercial entities. The decision whether to lease or sell a license would rest with the EBS licensee.[37] While NEBSA and CTN understand that the Commission wants to allow free market forces to drive spectrum to its highest and best use, free market forces do not always achieve this goal. Here, there are compelling reasons *not* to treat EBS like other services where eligibility and use restrictions have been eliminated.

First, as discussed above, the existing EBS licensing and leasing model has been a success, both in terms of serving the interests of local educators and meeting the needs of commercial entities deploying 4G and 5G broadband networks. Since licensed EBS spectrum is already being used efficiently for both educational and commercial purposes, there is no need to modify, much less eliminate, the current EBS eligibility restrictions in order to facilitate more intense use of this band.

Second, history shows that commercial licensing of EBS is not necessary to stimulate investment in the 2.5 GHz band. One need only to look at the investment Sprint has made in 2.5 GHz leases and buildouts to support that proposition. Spectrum in the 2.5 GHz band is the backbone of most of Sprint's 4G LTE capacity and provides the best data speeds for consumers.[38]

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[37] *Notice* at ¶ 20.

[38] *See* FCC File No. 0008224209, Description of Transaction, Public Interest Statement, and Related Demonstrations, Appendix E at 3, 8 (June 18, 2018, amended July 5, 2018). Sprint is invested in expanding its 4G LTE Advanced network and launch of mobile 5G network, which includes a significant deployment

Third, EBS is the only spectrum specifically set aside for educators to be used in furtherance of their educational missions. Under current rules, educators have a place "at the table" in deciding how the 2.5 GHz band can best be used to advance their interests. The partnerships between EBS licensees and commercial operators also provide important private funding and resources for education without government support.

Fourth, permitting market forces alone to dictate who is licensed on this spectrum would likely, over time, result in the *de facto* reallocation of EBS from educational to commercial interests. This would not be in the public interest. Spectrum assets that are licensed to educators empower them to use such assets in ways that best meet changing and challenging educational needs. The technology needs of education should not be driven exclusively by what the market will bear at a moment in time. EBS licensees use their spectrum, including services and funding provided through leases, for non-profit educational purposes, including closing the digital divide and the homework gap. As a matter of public policy, these are goals that the Commission has supported and should continue to support through EBS. The reality is that commercial operators do not build networks or serve populations and community needs without a profitable return. Non-profit EBS licensees, on the other hand, are motivated to increase educational opportunities and serve their communities with access to necessary technology.[39]

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of its 2.5 GHz spectrum on macro sites, small cells and Sprint Magic Boxes. *See* Sprint Press Release*, Sprint's Next-Gen Network Build Gains Momentum* (Aug. 1, 2018).

[39] The Commission has recognized the unique value of public interest spectrum set-asides in other contexts. For example, since reserving channels for what has become public television, the Commission has resisted any incursion into that reservation. *Amendment of Section 3.606 of the Commission's Rules and Regulations, et al.*, Docket Nos. 8736 *et al.*, *Sixth Report and Order*, 41 FCC 148 (1952). Even when the Commission approved the sale of noncommercial educational Channel 16 in Pittsburgh, Pennsylvania, it did so reluctantly. *Amendment of the Television Table of Allotments to Delete Noncommercial Reservation on Channel 16, 482-488 MHz, Pittsburgh, Pennsylvania*, MM Docket No. 01-276, *Report and Order*, 17 FCC Rcd 14038, 14052-53 at ¶ 40 (2002). In a joint statement issued with the Pittsburgh order, Chairman

As new technologies evolve, the current EBS reservation ensures the availability of spectrum dedicated to education. If the Commission allows EBS spectrum to be sold to commercial entities for a one-time payout, the public policy objectives served by EBS will be permanently and fatally compromised. While the sale of EBS spectrum might be beneficial to an *individual* licensee, cumulatively, such sales will be detrimental to education. In situations where an individual EBS licensee determines that it no longer has a continuing need for an EBS license, the licensee should transfer or assign the license to another eligible local educational institution that wants the license rather than selling it to a commercial entity. NEBSA and CTN appreciate the Commission's view that flexible use rules will ensure spectrum is put to its best use. However, here the regulatory model that the Commission already has put in place is sufficiently flexible to meet the needs of both educators and commercial operators.

VII. The Educational Nature of EBS Should be Preserved.

The existing regulatory model governing the 2.5 GHz band has resulted in successful public-private partnerships that benefit educators, students, commercial wireless service providers, and consumers. This model should be maintained for both existing EBS licenses and for new EBS licenses issued through the priority window filing process. The proposals put forward in these comments are intended to create opportunities for new educational entities so that they can benefit from the opportunities the Commission has made available through EBS licensing and leasing.

Although existing educational usage requirements contained in Sections 27.1203 and 27.1214 of the Commission's rules may be somewhat dated, the rules have successfully been

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Powell and Commissioners Abernathy and Martin emphasized that "removing the reservation of a channel for noncommercial education … is not a step the Commission should ever take lightly." 17 FCC Rcd at 14059.

applied to EBS spectrum deployed in broadband networks. NEBSA and CTN would support a modernized method of measuring educational use, but it is difficult to develop alternate metrics given the differing uses of EBS spectrum by individual licensees.[40] Any changes to the existing rules should avoid dictating specific uses or difficult-to-achieve metrics through command and control regulation because any new uses or metrics will likely become outdated in short order.

This same argument applies to the rules regarding educational reservation in leases. There is no need to adopt a higher spectrum reservation for new licenses as the Commission proposes.[41] Existing lease terms concerning the amount and use of reserved spectrum should remain unchanged, and in new or amended leases, EBS licensees should be free to negotiate whatever spectrum reservation or educational use provisions they wish, subject to applicable Commission rules.[42]

VIII. The Existing 30-Year Limit on Lease Terms Should be Retained.

NEBSA and CTN recommend that the Commission retain the current 30-year limit on lease terms. The Commission has imposed term limits since first permitting EBS leasing in 1983, and with few exceptions, the maximum limit tends to become the *de facto* norm. While the previous 10 and 15-year lease term limits may have been too short to spur investment in the band, the current

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[40] If the educational use rules are modernized, it is important to keep in mind that existing spectrum lease agreements may limit how much flexibility some licensees have to change or significantly increase their educational usage.

[41] *Notice* at ¶ 48 ("For EBS licenses granted via the local priority windows proposed above, we propose to require that licensees must reserve a minimum of 20 percent of the capacity of their channels for educational uses that 'further the educational mission of accredited public and private schools' consistent with paragraphs (b) and (c) of Section 27.1203 of the Commission's rules, and may not enter into spectrum leasing arrangement involving this reserved capacity.").

[42] If the Commission does adopt any changes to current educational use and/or reservation standards, such changes should only be applied to new EBS licenses and to existing licenses at the conclusion of current leases so as not to disrupt contractual arrangements and the bargained-for benefits provided therein.

30-year limit has turned out to be just about right. It provides an adequate level of investor certainty for long-term planning while preserving the ability of EBS licensees to periodically reassess their partnerships and needs. Even when the Commission decided to extend the maximum term to 30-years, it only did so on the condition that EBS licensees have the right to review their educational use requirements and needs on a periodic basis.[43] If lease term limits are eliminated, the new *de facto* standard (*i.e*., the only offers licensees will receive) will likely become 60 or 90 years, which is not in the best interest of educators who will lose the opportunity to reevaluate lease terms and benefits derived from particular leases and lease partners.

IX. The Commission Should Adopt Reasonable EBS Performance and Renewal Requirements.

The *Notice* seeks comment on the appropriate performance and license renewal standards for newly issued licenses, as well as renewal standards for current licenses.[44] For the reasons discussed above, including the fact that the priority local filing windows would be limited to a more restricted definition of eligible entities than the rules currently allow, NEBSA and CTN see no reason to impose different standards on new licenses.

The Commission proposes applying the wireless harmonized renewal standard in Section 1.949 of the rules to new licenses and perhaps existing licenses.[45] If this renewal standard is

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[43] *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, WT Docket 03-66, *Order on Reconsideration and Fifth Memorandum Opinion and Order and Third Memorandum Opinion and Order and Second Report and Order,* 21 FCC Rcd 5606, 5716 at ¶270 (2006) ("any action that can perpetually bind an EBS licensee to an agreement that might cease to serve its interests, without the opportunity to renegotiate the terms thereof, would be seriously detrimental to the educational mission.").

[44] *Notice* at ¶ 55.

[45] *Id*.

applied, an EBS licensee should be able to meet it by relying on a safe harbor as set forth in Section 1.949(e)(2) of the rules. Thus, an EBS licensee should be able to assert the renewal safe harbor by certifying it meets the substantial service requirements set forth in Section 27.14(o).[46] The Commission provided five years in the wireless renewal proceeding for licensees to transition to the new requirements,[47] and should similarly provide a five-year transition period for existing EBS licenses to adapt to the new standard.

X. Conclusion.

While clearly unique, the existing EBS regulatory model works well. Flexible use rules are already in place and have resulted in robust broadband deployment in areas where EBS is licensed. Indeed, the mixture of mobile wireless service provided by Sprint (mostly in cities and their suburbs) and fixed wireless broadband provided by dozens of smaller rural Internet service providers is a direct result of the flexibility provided by the Commission's current rules. At the same time, those rules have the added benefit of furthering other important national policy goals, including closing the digital divide and the homework gap. EBS has undergone several transformations to get to this point, and there is no reason now to disrupt and overhaul the band. The licensing of white space, perhaps along with a few minor updates to the rules, is all that is necessary to put the entire band to its best and highest use. As the primary organizations with

[46] The substantial service "safe harbor" in Section 27.14(o)(2)(iii) incorporates the educational use requirement of twenty hours per channel per week specified in Section 27.1214 of the rules. This safe harbor would need to be reconsidered if the Commission were to change the educational use standards.

[47] *Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services,* WT Docket No. 10-112, *Second Report and Order and Further Notice of Proposed Rulemaking*, 32 FCC Rcd 8874, 8890 at ¶ 37 (2017).

experience in the EBS regulatory regime, NEBSA and CTN look forward to working with the Commission, new educational licensees, and commercial operators to develop a white space licensing regime to ensure broadband and educational services are made available nationwide, including unserved and underserved rural areas.

Respectfully submitted,

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