

In the Matter of)
)
Transforming the 2.5 GHz Band) WT Docket No. 18-120
To: The Commission

Stephen E. Coran
Lerman Senter PLLC
2001 L Street, NW, Suite 400
Washington, DC 20036
(202) 416-6744
Counsel to the Wireless Internet Service Providers Association

August 8, 2018

Table of Contents

Summary	iii
Background	3
Discussion	8
I. THE COMMISSION SHOULD AMEND ITS RULES TO MAXIMIZE THE UTILITY AND FLEXIBILITY OF EXISTING EBS LICENSES	8
A. With Certain Narrow Exceptions, The Commission Should Automatically Expand The Geographic Service Areas Of Existing Licensees To County Borders	8
B. The Commission Should Afford EBS Licensees Additional Flexibility	9
II. THE COMMISSION SHOULD ADOPT LICENSING RULES AND PERFORMANCE REQUIREMENTS THAT PROMOTE INTENSIVE COMMERCIAL USE OF UNASSIGNED 2.5 GHz SPECTRUM.....	14
A. The Commission Should Auction Unassigned 2.5 GHz Spectrum	14
1. Local Priority Windows Would Perpetuate Outdated Policies And Use Cases	14
2. The Commission Should Make Unassigned 2.5 GHz Spectrum Available Via Competitive Bidding.....	17
3. The Commission Should Auction Unassigned 2.5 GHz Spectrum By County	18
4. The Commission Should Adopt Rules To Encourage Robust Bidding By Small Providers	19
B. The Commission Should Adopt Its Proposed Performance Requirements	22
Conclusion	23

Summary

The Wireless Internet Service Providers Association (“WISPA”) commends the Commission for initiating this proceeding to modernize its rules for the Educational Broadband Service (“EBS”). Dramatic changes in the ways educational content is distributed to students, the indistinguishable nature of commercial and educational use of the band, and fallow spectrum covering a large part of rural America combine to form a rare opportunity for the Commission to take bold action to promote flexibility, competition, and rural broadband deployment.

With respect to existing licensees, WISPA supports automatic expansion of Geographic Service Areas (“GSAs”) to the overlapping county border. This approach will eliminate many hard-to-serve geographic slivers that would remain if the Commission authorized GSA expansion only to overlapping census tract borders. To avoid creating a windfall for existing EBS licensees and to ensure that new applicants have access to sufficient unassigned spectrum, GSAs should not expand unless they cover 35 percent or more of the geographic area of the county.

WISPA also recommends adoption of the Commission’s proposals to eliminate (1) restrictions on the assignability and transferability of EBS licenses, (2) the educational use requirements, and (3) the 30-year maximum term for excess capacity lease terms. These rule changes would provide licensees with significant additional flexibility that can be exercised to promote educational objectives and more intensive commercial use of the band. Eliminating these rules would appropriately reverse the outdated belief that setting aside valuable mid-band spectrum for educational use continues to be good policy when the resulting commercial and educational uses are indistinguishable. In short, the restrictions on assignability, educational use, and lease terms have outlived their original purpose.

For the significant amount of unassigned spectrum that remains, WISPA recommends that the Commission reject its proposal to prioritize licensing to local educators in favor of direct competitive bidding by any applicant meeting the Commission's general eligibility requirements. It would be inconsistent for the Commission to promote long-needed flexibility for existing licensees at the same time it creates a proxy system that would re-institute the barriers and inefficiencies associated with an outdated spectrum leasing model that increases transactional and operational costs. The Commission should conduct auctions in four contiguous channel blocks at the county level to better harmonize with the expanded GSAs for existing EBS licensees. As a necessary means to foster auction participation by small entities poised to deploy competitive and innovative services, the Commission should limit the amount of spectrum any one entity can acquire in an auctioned county. With this safeguard, small broadband providers will have a more meaningful opportunity to bid for and acquire protected, unencumbered mid-band spectrum to serve the needs of rural Americans that lack broadband choice.

The Commission also should adopt its proposed performance requirements and apply its renewal and permanent discontinuance rules to new 2.5 GHz licenses.

In the Matter of)
)
Transforming the 2.5 GHz Band) WT Docket No. 18-120
To: The Commission

¹ *Transforming the 2.5 GHz Band*, Notice of Proposed Rulemaking, WT Docket No. 18-120, FCC 18-59 (rel. May 10, 2018) (“*NPRM*”). The *NPRM* was published in the Federal Register on June 7, 2018. See 83 Fed. Reg. 26396 (June 7, 2018). The Commission granted in part requests for extension of time and set August 8, 2018 as the deadline for filing Comments and September 7, 2018 as the deadline for filing Reply Comments. See *Order*, WT Docket No. 18-120, DA 18-647 (rel. June 21, 2018).

The Commission has the opportunity in this proceeding to modernize its rules, free up spectrum for commercial broadband service in rural areas, and promote the public interest in having greater access to spectrum infrastructure. With members that both lease EBS spectrum capacity and those that have a strong interest in gaining access to 2.5 GHz spectrum, WISPA is uniquely positioned to offer its perspectives on how the Commission can reform its rules both to rationalize existing EBS spectrum use and to create opportunities for fallow EBS spectrum in vast rural regions of the country to be put to use expeditiously.

In these Comments, and building on the proposals made and questions raised in the *NPRM*, WISPA proposes a comprehensive regulatory regime to achieve these twin objectives. For existing EBS licensees, WISPA recommends that Geographic Service Areas (“GSAs”) be expanded to county borders in a manner similar to that articulated in the June 2014 joint industry proposal, with a reasonable limiter to prevent windfall geographic expansion. To promote additional flexibility, the Commission should eliminate restrictions on the sale of EBS licenses to commercial entities, eliminate educational use requirements, and eliminate the 30-year maximum excess capacity lease term, with the understanding that existing EBS spectrum leases will continue to govern the lessor-lessee relationship.

WISPA further recommends that, instead of establishing filing windows that would prioritize licensing of unassigned EBS spectrum to local educational institutions, the Commission should auction unassigned 2.5 GHz spectrum to any qualified bidder, with the necessary condition that no entity could acquire more than 63 megahertz of the auctioned spectrum in a given area (assuming all five EBS channels groups are available for auction). Competitive bidding for 2.5 GHz spectrum should be at the county level to create consistency with the expanded GSA for existing licensees. To prevent spectrum warehousing, the

Commission should adopt its proposed performance requirements and apply its renewal and permanent discontinuance rules to new licenses.

Taken together, WISPA's recommendations would maximize the inherent, but unrealized, commercial benefits of 2.5 GHz spectrum. To be sure, education and distance learning are important national objectives, but it does not follow that continuing to limit eligibility for exclusive licensing by a narrow class of entities with restrictive use requirements is the best way to promote those goals. Instead, modernizing the EBS service in recognition of the sea changes that have occurred over the past few decades will promote deployment, investment, competition, and economic growth.

Background

WISPA is the trade association that represents the interests of wireless Internet service providers ("WISPs") that provide high-speed fixed wireless broadband services to consumers, businesses, and anchor institutions across the country. WISPA's members include more than 800 WISPs, equipment manufacturers, distributors, and other entities committed to providing affordable and competitive fixed broadband services. WISPA estimates that WISPs serve more than 4,000,000 people, many of whom reside in rural areas where wired technologies may not be available or are not cost-effective to deploy and where unassigned EBS spectrum is available.

To meet subscribers' needs, WISPs rely on a combination of licensed, lightly licensed (shared access), and unlicensed bands, including the 900 MHz, 2.4 GHz, 2.5 GHz, 3.65 GHz, and 5 GHz bands. Over the last several years, some WISPA members have acquired EBS spectrum lease rights to obtain the benefits of wide-area protected mid-band spectrum to improve service to subscribers and/or expand service to new areas, in many cases to rural communities that would otherwise be unserved or underserved. Many of these leases have been negotiated

and executed with EBS licensees that had no spectrum lease in place, while others were obtained on the secondary market by acquiring lease rights from other commercial lessees. A few examples:

- ***Aeronet Wireless Broadband*** – Based in Puerto Rico and serving primarily commercial subscribers, Aeronet, through a series of transactions, has acquired island-wide rights to EBS spectrum covering 125 million MHz-pops. Aeronet is currently using the spectrum for point-to-point links and plans to deploy fixed LTE-based point-to-multipoint commercial service later this year.
- ***Rise Broadband*** – The largest WISP with more than 160,000 customers in 16 states, Rise Broadband holds 20 EBS spectrum capacity leases covering rural areas of Illinois, Missouri, Nebraska, and Texas. It has constructed 124 2.5 GHz base stations and is providing commercial fixed broadband service to approximately 4,500 subscribers on that spectrum, the vast majority of which are residential.
- ***Wisper ISP*** – Wisper is based in Southern Illinois and has acquired EBS lease rights in rural Southeastern Illinois, Southwestern Missouri, Arkansas, and Oklahoma. It is providing fixed wireless broadband service to approximately 464 (and growing) primarily residential subscribers on its leased 2.5 GHz spectrum. Wisper is using LTE-based equipment to provide service with speeds of up to 20 Mbps download and 4 Mbps upload in some areas.
- ***Crystal Automation Systems dba Casair*** – Casair is a 30-year-old company that owns and operates a hybrid fiber and wireless network consisting of more than 580 miles of fiber and 97 tower sites in Michigan. It provides customers up to 10 Gbps download speeds on fiber and over 100 Mbps download speeds on fixed wireless. Casair has utilized its leased 2.5 GHz spectrum for the past six years as an integral part of its layered approach to deliver broadband to homes and businesses over fiber, unlicensed wireless, lightly licensed wireless, and licensed 2.5 GHz spectrum that delivers broadband and voice service to more than 32,000 home, business and student housing users in rural Central Michigan.
- ***Gtek*** – Gtek entered into EBS spectrum leases in 2015 for spectrum covering rural areas outside of Corpus Christi, Texas. Gtek is providing service to more than 750 customers with download speeds of up to 25 Mbps and upload speeds of up to 3 Mbps. Gtek's plan is to continue to deploy LTE to offer faster speed and greater reliability to customers that are in areas where line-of-sight is an issue.
- ***Texoma dba TekWav*** – TekWav has acquired rights to two EBS spectrum leases straddling the Oklahoma-Texas border near Sherman, Texas, and is currently providing LTE-based fixed broadband service to approximately 200 customers.

Notwithstanding these successful efforts, for a variety of reasons WISPA members often have been frustrated in their ability to gain access to 2.5 GHz spectrum. First, there are relatively few EBS licenses that are available for lease, either because the spectrum is unassigned in the area, as is the case in many rural areas, or the licensee prefers not to lease its spectrum. Second, Sprint, by far the largest holder of EBS lease rights, generally has not been willing to assign or sublease its EBS spectrum, even in rural markets where it has not deployed commercial service and may not deploy service for several years. Third, except in rare cases where entities have obtained waivers, the Commission has not granted any new EBS licenses since 1996. These regulatory impediments and lack of a vibrant secondary market have long impaired the ability of small fixed wireless providers to gain access to critical mid-band spectrum that can help bridge (and in some places, is bridging) the digital divide.

Commission reports confirm the lack of fixed broadband availability and competition in rural areas. According to the Commission's *2016 Broadband Progress Report*, five percent of rural Americans lack access to fixed broadband service at 4 /1 Mbps, six percent lack access to 10 /1 Mbps service, and 39 percent (23 million people) lack access to 25/3 Mbps service.² Rural Americans also lack choice – 48 percent have access to one provider and only 13 percent have access to more than one provider.³ The *2016 Broadband Progress Report* also found a correlation between broadband access and household income, concluding that “[o]n average, the proportion of the population without access is highest in counties with the lowest median household population, the lowest population density, the highest rural population and the highest poverty rate.”⁴ According to the U.S. Department of Agriculture, 85 percent of persistent

² *2016 Broadband Progress Report*, 31 FCC Rcd 699, 731-32 (2016).

³ *See id.* at 736, Table 6.

⁴ *See id.* at 740 (footnote omitted).

poverty counties – those that have been high in poverty for at least 30 years – are in rural areas.⁵

Chairman Pai summed it up:

If you live in rural America, you are much less likely to have high-speed Internet service than if you live in a city. If you live in a low-income neighborhood, you are less likely to have high-speed Internet access than if you live in a wealthier area. The digital divide in our country is real and persistent.⁶

A primary reason for this ongoing gulf is that wired technologies such as fiber-to-the-premises (“FTTP”) and cable broadband cannot be cost-effectively deployed in areas with low population density.⁷ Last year, the *Wall Street Journal* reported that “[r]ural America can’t seem to afford broadband: Too few customers are spread over too great a distance. The gold standard is fiber-optic service, but rural internet providers say they can’t invest in door-to-door connections with such a limited number of subscribers.”⁸ A recent economic report provides the following example:

⁵ *The Economic Report of the President*, White House Council of Economic Advisors, March 2014 at 233 available at

https://www.whitehouse.gov/sites/default/files/docs/full_2014_economic_report_of_the_president.pdf (last visited July 11, 2014), citing to The United States Department of Agriculture, Geography of Poverty available at <https://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being/geography-of-poverty.aspx#.UurSXhBdXA0> (last visited July 11, 2014).

⁶ Remarks of Chairman Ajit Pai at the American Enterprise Institute, “The First 100 Days: Bringing the Benefits of the Digital Age to All Americans,” May 5, 2017, at 2. Chairman Pai also noted that “[i]n urban areas 98% of Americans have access to high-speed fixed service. In rural areas, it’s only 72%. 93% of Americans earning more than \$75,000 have home broadband service, compared to only 53% of those making less than \$30,000.” Remarks of FCC Chairman Ajit Pai at “Broadband for All” Seminar, Stockholm, Sweden, June 26, 2017, at 1.

⁷ See, e.g., *Google Curbs Expansion of Fiber Optic Network, Cutting Jobs*, New York Times, Oct. 25, 2016, available at http://www.nytimes.com/2016/10/26/technology/google-curbs-expansion-of-fiber-optic-network-cutting-jobs.html?_r=0 (“In June [2016], Google Fiber announced that it was acquiring Webpass, a company that beams high-speed internet into apartment buildings using a fiber-connected antenna. This and other wireless technologies provide a quicker and less expensive way to expand access to faster web speeds”); Hal Singer, *Assessing the Impact of Removing Regulatory Barriers on Next Generation Wireless and Wireline Broadband Infrastructure Investment* (June 2017) (“Singer Infrastructure Report”), at 32 (estimating that, even if infrastructure barriers are removed, only 71 percent of the nation’s premises will be economically viable for fiber).

⁸ Jennifer Levitz and Valerie Bauerlein, *Rural America is Stranded in the Dial-Up Age*, Wall Street Journal, June 16, 2017 at A1. The article estimates that it costs \$30,000 per mile to install optical fiber.

To illustrate, consider a neighborhood of 100 homes requiring a [fiber] network of 1,000 feet. If the average labor and materials for the labor was \$20/foot, then this network would cost \$20,000 to build, or \$200 per home passed. Now, consider the same neighborhood with 10 homes, but still has the same network requirements to reach them all – the cost per home increases to \$2,000, a decidedly less profitable and economically feasible arrangement. *Unless the cost structure or the revenue potential of an area changes, then all else equal, a more rural area will not be built with fiber.*⁹

As the above statistics, reports, and statements confirm, rural consumers are less likely to have access to affordable residential broadband service than their urban counterparts, and the nation's largest FTTP and cable broadband providers cannot reasonably be expected to solve that problem. Rather, small, rural providers will fill much of that void with high-quality and affordable fixed wireless service – if they have access to spectrum that can be deployed at a fraction of the capital cost of wireline plant.¹⁰ And, as the Commission observed in the *NPRM*, “[i]ncumbent EBS licenses cover only about one half of the geographic area of the United States. In the rest of the country, mostly rural areas west of the Mississippi, the 2.5 GHz spectrum remains unassigned.”¹¹ *In other words, the rural areas where broadband is most lacking are the same rural areas where there is likely to be unassigned EBS spectrum.*

This proceeding affords the Commission the opportunity to reset the antiquated EBS rules that have stagnated commercial opportunities to deploy spectrum infrastructure in rural communities across the country. The Commission can make available a large supply of unused spectrum that just happens to be where access to cost-effective fixed broadband is in heavy demand. WISPA believes this goal can be accomplished without limiting the rights of existing

⁹ Singer Infrastructure Report at 14 (emphasis added).

¹⁰ See The Carmel Group, *Ready for Takeoff: Broadband Wireless Access Providers Prepare to Soar with Fixed Wireless* (2017), available at http://www.wispa.org/Portals/37/Docs/Press%20Releases/2017/TCG's_2017_BWA_FINAL_REPORT.pdf (last visited Aug. 2, 2018), at 12, Fig. 6 (estimating that residential fixed wireless broadband can be deployed at about one-seventh the capital cost of FTTP and one-fourth the capital cost of cable).

¹¹ *NPRM* at 3, ¶ 5 (footnote and citation omitted).

EBS licensees, by affording them additional flexibility to determine how to best use their spectrum and making available an untapped spectrum resource for commercial broadband providers to acquire spectrum that can promote broadband choice for rural Americans.

Discussion

I. THE COMMISSION SHOULD AMEND ITS RULES TO MAXIMIZE THE UTILITY AND FLEXIBILITY OF EXISTING EBS LICENSES

A. With Certain Narrow Exceptions, The Commission Should Automatically Expand The Geographic Service Areas Of Existing Licensees To County Borders

WISPA agrees with the Commission's proposal to "rationalize" the GSAs of existing licensees by automatically expanding the site-based 35-mile radius GSA to a geographic-based GSA.¹² However, instead of adopting its proposal to expand GSAs to the borders of census tracts that overlap the existing GSA, the Commission should, as a general rule, adopt its alternative proposal to expand GSAs to include the counties covered by or that intersect the GSA.¹³ This alternative is largely consistent with an industry proposal negotiated and submitted by a diverse group of stakeholders in 2014.¹⁴

Expanding GSAs only to census tract borders will leave smaller, irregularly shaped slivers between GSAs that will be difficult to serve or license without causing interference to adjacent GSAs or requiring inefficient architectures, even assuming there would be available vertical infrastructure in the sliver. Accordingly, these deployment-challenged areas will have little value in any subsequent licensing process the Commission adopts. By contrast, county-based GSAs will close many of the gaps between GSAs and in many places mitigate, if not

¹² *Id.* at 6, ¶ 11.

¹³ *See id.* at 7, ¶ 17.

¹⁴ *See* Letter from Catholic Technology Network, National EBS Association, Wireless Communications Association International and Hispanic Telecommunications Information Network, Inc. to Marlene H. Dortch, Secretary, FCC, WT Docket 03-66 (filed June 6, 2014) ("Consensus Proposal").

entirely eliminate, the irregularly shaped slivers. County-based GSAs also will make future licensing of unassigned spectrum more efficient given the likelihood that many slivers would either be acquired by the neighboring licensee via subsequent licensing (an unnecessary process), or remain unassigned because of their lack of value and deployment difficulties. GSA expansion should be automatic to ensure that gaps are closed and to avoid the public burdens and administrative resources associated with Paperwork Reduction Act “information collection” obligations and approval, and with preparing, filing, and granting routine modification applications. The expansion of GSAs should occur before the Commission licenses unassigned EBS spectrum.

Consistent with the Consensus Proposal, in cases where there is more than one GSA covering a part of the county, the Commission should split the county and automatically expand each GSA to fill the county.¹⁵ Again, this will close gaps between GSAs that would otherwise remain unlicensed and unserved.

WISPA acknowledges that in cases where a licensee’s GSA covers a small portion of a county,¹⁶ expanding the GSA to cover the entire county would confer an unfair windfall on the subject licensee(s). Accordingly, the GSA should not expand where the licensee is the only licensee with a GSA covering the county and the GSA covers less than 35 percent of the area of the county. The Commission may also desire to consider using a population-based limiter as an alternative to or in conjunction with a geographic-based limitation on GSA expansion.

B. The Commission Should Afford EBS Licensees Additional Flexibility

The Commission makes a series of proposals concerning the continuing utility of long-standing rules that restrict EBS licensees from achieving greater flexibility in how they use their

¹⁵ See *NPRM* at 7, ¶ 14.

¹⁶ See *id.* at ¶ 18.

licenses.¹⁷ WISPA wholeheartedly supports each of these proposals as part of a comprehensive approach to modernize the rules for the benefit of licensees, their commercial lessees, and the public. WISPA notes that any changes the Commission adopts should not override the provisions of any lease or other agreement between the EBS licensee and its commercial lessee; rather, consistent with past practice, existing leases should be grandfathered and the rule changes subject to the provisions of such agreements.¹⁸

Amending the rules to afford licensees greater flexibility would be the next logical step in the evolution of the 2.5 GHz band. Over time, as the Commission has re-defined what may qualify as educational use in order to provide licensees with greater flexibility, circumstances have evolved that obviate the need for preserving the exclusive educational set-aside of the band. In authorizing two-way transmissions in 1998, the Commission generally observed that allowing ITFS licensees¹⁹ to have greater flexibility in how to meet the educational usage requirements would promote the public interest, stating that:

The Commission has long been loath to substitute its judgment for the judgment of educational authorities concerning what precise ITFS usage is regarded as educational, where such usage otherwise complies with Commission requirements that it be provided to students enrolled in accredited institutions. We believe that availability of advanced technologies dictates that it is now time to accord ITFS licensees increased flexibility in determining which transmissions qualify as satisfying ITFS usage requirements, so long as such transmissions are in furtherance of the educational mission of an accredited public or private school, college or university, or other eligible institution, offering courses to enrolled

¹⁷ See *id.* at 8-9, ¶¶ 20-24.

¹⁸ See *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*, Report and Order and Further Notice of Proposed Rulemaking, WT Docket No. 03-66, 19 FCC Rcd 14165, 14233-34 (2004) (“We also agree with commenters that existing leases entered into under our existing ITFS leasing framework should be grandfathered, so long as the leases remain in effect and are not materially changed. We agree with NIA/CTN that it would be unduly burdensome to force licensees that wish to have their existing leases remain in effect to renegotiate those leases to comply with our Secondary Markets policies and rules.”).

¹⁹ The Instructional Television Fixed Service (“ITFS”) was renamed the Educational Broadband Service in 2004.

students. Such uses may include downstream or upstream video, data and voice transmissions. In addition, while heretofore not qualifying to satisfy educational usage requirements, qualifying uses now may include, but are not limited to, teacher conferencing, remote test administration, distribution of reports and assignments, research towards and sharing works of progress in projects for courses, professional training, continuing education, and other similar uses. Furthermore, in light of the myriad of possible uses of the spectrum for courses by accredited schools, we no longer need a separate rule pertaining to where transmissions are not to on-campus receive sites. *Because we fully expect several qualifying transmissions to and from homes and other off-campus sites*, retention of such a rule would be unduly burdensome to ITFS applicants and licensees.²⁰

In a subsequent rulemaking proceeding, the Commission, among other things, adopted the current 2.5 GHz band plan.²¹ In response to a petition for reconsideration seeking guidance on how to interpret the five percent educational capacity reservation required for EBS spectrum leases, the Commission stated that:

the Commission's reasons for rejecting this proposal in 1998 are even more applicable today, as it promotes flexibility in accommodating the needs of EBS licensees that have different educational goals and different spectrum requirements while safeguarding the primary educational purpose of the ITFS spectrum allocation. Moreover, in a climate where the Commission is making great strides towards making its rules flexible and granting maximum flexibility to licensees, to reconsider this long-resolved issue in a manner that would impede upon such flexibility would do a great disservice to the public interest.²²

The limited flexibility afforded EBS licensees in these decisions may have been good policy at the times they were rendered, but rapid technological and market changes that have

²⁰ See *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Two-Way Transmissions*, Report and Order, MM Docket No. 97-217, 13 FCC Rcd 19112, 19154-55 (1998) ("*Two-Way Order*") (footnotes and citations omitted) (emphasis added).

²¹ See *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*, Report and Order and Further Notice of Proposed Rulemaking, WT Docket No. 03-66, 19 FCC Rcd 14165 (2004) ("*Rebanding Order*"). The Commission relocated and consolidated the Broadband Radio Service ("BRS") and EBS rules in Part 27.

²² See *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*, Order on Reconsideration and Fifth Memorandum Opinion and Order and Third Memorandum Opinion and Order and Second Report and Order, WT Docket No. 03-66, 21 FCC Rcd 5606, 5701 (2006) (citation omitted).

evolved in the last 20 years have altered the way educational services are provided to students. During this same time period, and as a result of the increased flexibility flowing from these past decisions, the educational use and commercial use of EBS spectrum have become indistinguishable.

The Commission can either ignore these realities by perpetuating the fiction that educational licensees are necessary middlemen, or it should take the next logical step in promoting flexibility in spectrum use by removing restrictions that have impaired the ability of licensees to make their own decisions and of commercial lessees to maximize utility, investment, and value. In WISPA's view, the answer is clear – the Commission should modernize requirements that are “out of date and do not fit the actual use of the spectrum.”²³

Flexibility to Assign Licenses

The Commission should eliminate Section 27.1201 of the Commission's Rules and permit EBS licensees to voluntarily sell or transfer their licenses to commercial entities.²⁴ In some cases, licensees may choose to sell their licenses and reap the one-time benefits of a lump sum payment at closing. The proceeds of such sales could be used to fund important educational and instructional activities. For EBS licensees that lease spectrum, the option of selling an EBS license can eliminate the risks inherent in long-term leases, such as non-payment of lease fees, non-performance of lease obligations, and the assignment of the lessee's interest to a third party. Of course, the licensee could, consistent with the terms of its existing excess capacity lease, continue to hold its license if it so chooses. As the Commission observes, “there is little reason

²³ *NPRM* at 9, ¶ 22.

²⁴ *See id.* at 8, ¶ 20.

to think that licensees should not be allowed to decide for themselves whether to continue to hold their licenses or to transfer them to a third party in the secondary market.”²⁵

Eliminating Educational Use Requirements

The Commission should adopt its proposal to eliminate the educational use requirements of Sections 27.1203(b) and (c).²⁶ For the most part, as the Commission acknowledges, “EBS licensees or their commercial lessees are providing digital broadband service, offered 24/7, at the school itself, at home, or anywhere within the licensee’s GSA.”²⁷ In other words, educational use has become indistinguishable from the commercial broadband service offered by the commercial lessee throughout the community. Yet despite this fact, the educational set-aside encumbers EBS licenses and thus artificially lowers spectrum value. The benefits of the educational use requirements have outlived their utility, and thus should be eliminated.

Flexibility for Longer Lease Terms

The Commission also should adopt its proposal to lift the restrictions in Section 27.1214(e) that limit EBS lease terms to 30 years.²⁸ No other service for which spectrum leasing is permitted contains a maximum term limit and, coincident with eliminating other leasing restrictions, removing the 30-year limit will increase flexibility for both lessors and lessees. Licensees could still negotiate terms of 30 years or less, but would have the right to increase revenue potential or obtain other benefits by agreeing to longer terms. Lessees could benefit from having greater long-term certainty of access to spectrum, which could promote more investment by increasing access to capital on more favorable terms.

²⁵ *See id.*

²⁶ *See id.* at 8-9, ¶ 22.

²⁷ *Id.* at 9, ¶ 22.

²⁸ *See id.* at ¶ 23.

In sum, the trio of proposed rule changes will, without disturbing the ability of EBS licensees to stay the course, afford greater flexibility in how licensees can choose for themselves how to best utilize – or monetize – their spectrum.

II. THE COMMISSION SHOULD ADOPT LICENSING RULES AND PERFORMANCE REQUIREMENTS THAT PROMOTE INTENSIVE COMMERCIAL USE OF UNASSIGNED 2.5 GHz SPECTRUM

A. The Commission Should Auction Unassigned 2.5 GHz Spectrum

The Commission seeks comment on how it should allocate unassigned EBS spectrum.²⁹ Among its suggestions is an approach that would establish filing windows prioritizing opportunities for existing EBS licensees, Tribal nations, and local educational institutions.³⁰ For a number of reasons, the Commission should reject this approach, and instead allocate new 2.5 GHz licenses by competitive bidding in which qualified commercial entities would be eligible to participate. Auction winners should not be required to comply with educational use rules that, as illustrated by the Commission’s proposals to eliminate them for existing licenses, limit flexibility and investment that unnecessarily encumbers use. To quote Commissioner O’Rielly: “Let’s figure out what to do with the incumbents, auction the rest, and put this band in the best position for future success.”³¹

1. Local Priority Windows Would Perpetuate Outdated Policies And Use Cases

Establishing a three-part filing window process for new EBS licenses would be a step in the wrong direction. History has shown that authorizing licenses to a discrete class of middlemen educational institutions is an unnecessary artifice that stands in the way of maximizing the commercial use that is indistinguishable from educational use. For a number of

²⁹ See *id.* at 10, ¶ 27.

³⁰ See *id.* at 10-15, ¶¶ 27-46.

³¹ See *id.* at 39, Statement of Commissioner Michael O’Rielly (“O’Rielly Statement”).

reasons, the Commission should reject the filing window approach for allocating new 2.5 GHz licenses.

First, filing windows prioritizing future licensing for eligible educational entities would contravene the rule changes the Commission proposes for existing licensees. It would be incongruous for the Commission to, on one hand, eliminate educational use requirements, restrictions on EBS license assignments and transfers, and lease term limits for existing licensees, and then, on the other hand, impose those same restrictions on new licensees. Citing decisions dating to 1983, the Commission acknowledges that “subsequent events have confirmed the Commission’s prediction that ‘consumer benefits will be maximized if BRS/EBS licensees are able to take advantage of the flexible use standard in Part 27.’”³² Given that belief, it would defy logic for the Commission to consider deregulating EBS for existing licensees while instituting a regulatory regime that is based on a process adopted 30 years ago which, by the Commission’s own admission, artificially limits flexibility.

Second, it is not necessary to promote distance learning and education through dedicated exclusive use of spectrum by educational institutions. In 1998, the Commission amended its rules to expand the list of acceptable educational uses for EBS spectrum to include “teacher conferencing, remote test administration, distribution of reports and assignments, research towards and sharing works of progress in projects for courses, professional training, continuing education, and other similar uses.”³³ The Commission also permits EBS licensees to lease up to 95 percent of their spectrum capacity and reserve only five percent for educational use. And since these rules were adopted, schools and other educational institutions have benefited from E-rate, state broadband funding, and other sources to ensure that schools are connected to the

³² See *id.* at 8, ¶ 19 (citation omitted).

³³ *Two-Way Order* at 19154.

Internet. Considered together, the circumstances that have evolved over the last 20 years or so have greatly diminished the need for exclusive mid-band spectrum to be licensed solely to educational institutions. As Commissioner O’Rielly points out, the overwhelming majority of EBS licensees lease up to 95 percent of their spectrum for commercial purposes, and “we should stop pretending that this issue is about interactive school television or other educational purposes.”³⁴ Commissioner Carr apparently agrees, concluding that “the overwhelming majority of EBS spectrum is not being used for educational broadband. Instead, because of the Commission’s outdated or incorrect judgments about the band’s best use, schools and wireless providers have had to devote a lot of resources to work around our rules.”³⁵

Third, it is not difficult to predict that those schools acquiring licenses through the filing window process would simply lease their spectrum – probably 95 percent of it – under a pre-arranged deal with a commercial entity, or would conduct a post-grant process inviting leasing offers. This perpetuates an inefficient, multi-step process that increases transactional costs for the benefit of consultants that line up educators to file applications and help cut deals with commercial operators – all so a middleman licensee can reserve just five percent of its spectrum to deliver a service that is indistinguishable from the commercial broadband offering. This is nothing short of a contrived proxy system for the ultimate, yet encumbered, benefit of commercial interests – a continuation of the “command and control set-asides and restrictions on spectrum use [that] are not the most effective way to serve students.”³⁶

The Commission correctly recognizes the need to afford existing licensees greater flexibility and proposes to depart from the command and control model to allow licensees, rather than the Commission’s predictive judgment, to make market-based decisions. The Commission

³⁴ O’Rielly Statement.

³⁵ *See id.* at 40, Statement of Commissioner Brendan Carr (“Carr Statement”)

³⁶ *Id.*

has an opportunity to reverse the narrative of the “tortured history of the 2.5 GHz band”³⁷ into a future that properly accounts for evolutionary shifts in educational access to the Internet, replaces the Commission’s predictive judgment for market-based spectrum acquisition, and maximizes efficient, flexible, commercial spectrum use. These objectives can be accomplished not via local priority windows available only to a narrow class of eligible applicants that have little incentive to use the spectrum for educational and instructional purposes, but by allowing commercial entities to bid on unassigned 2.5 GHz spectrum.

2. The Commission Should Make Unassigned 2.5 GHz Spectrum Available Via Competitive Bidding

As an alternative to local priority windows, the Commission seeks comment on other means by which it can assign vacant 2.5 GHz spectrum, including whether it should “consider moving directly to auction.”³⁸ With the specific narrow exceptions described in Section II.A.4 below, WISPA believes that the Commission generally should apply its Part 1 auction rules to all currently unassigned EBS spectrum. Any entity meeting the Commission’s standard requirements for spectrum auctions, including educational institutions, should be eligible to apply for licenses.³⁹

There is significant unassigned spectrum, particularly in rural areas west of the Mississippi, and the Commission notes that the band has been underutilized.⁴⁰ As Commissioner O’Rielly observes, “its current licensing paradigm, coupled with a history of freezes, has led to significant underuse of this spectrum nationwide.”⁴¹ But in looking to the future, as

³⁷*Id.*

³⁸ *NPRM* at 19, ¶ 61.

³⁹ For administrative convenience, the Commission may also wish to auction unassigned BRS licenses in the same auction. These licenses would cover Basic Trading Areas that were either unacquired at previous BRS auctions or were forfeited by previous license holders.

⁴⁰ *See NPRM* at 3, ¶ 5.

⁴¹ O’Rielly Statement.

Commissioner Carr points out, “this band represents a potentially large, contiguous block of spectrum below 3 GHz that could be used for next generation mobile operations, including 5G.”⁴² The band also can be used for fixed wireless broadband deployments as well, and in fact WISPA members have actively sought and acquired access to 2.5 GHz spectrum rights to implement that business model. As is the case with other mid-band spectrum,⁴³ favorable propagation characteristics, competitive standard-based equipment, and demand for affordable fixed broadband in rural areas are driving significant interest in licensed spectrum.

Auctioning unassigned 2.5 GHz spectrum, if carefully implemented in the manner recommended below, will enable small, rural providers to acquire spectrum to help solve the digital divide. WISPs will be competing in the primary market for unencumbered spectrum, not solely in the secondary market where spectrum opportunities are limited and existing lessees may be reluctant to assign or sublease spectrum even in rural areas where they have no plans to deploy fixed service. In light of the fact that unassigned 2.5 GHz spectrum is available in large rural areas of the country where broadband access and choice are lacking, this band can be a significant part of the solution to the digital divide.

3. The Commission Should Auction Unassigned 2.5 GHz Spectrum By County

In auctioning unassigned 2.5 GHz spectrum, the Commission should use counties as the geographic unit. Unlike larger or smaller geographic areas, counties would generally conform future licensing to the expanded GSA geographic unit the Commission proposes for existing

⁴² Carr Statement.

⁴³ As the Commission is well aware, WISPA has advocated for rules in the Citizens Broadband Radio Service (“CBRS”) that would enable its members to competitively bid for Priority Access Licenses (“PALs”). As a co-founder of the Broadband Access Coalition, WISPA is leading an effort to allow point-to-multipoint operations on a shared basis in a portion of the 3700-4200 MHz band.

licensees. Stated another way, it would be illogical for the Commission to use county-based licenses for existing licensees and something different going forward.⁴⁴

As well, there are significant policy reasons for adopting counties. As the Commission observes, there is a substantial amount of unassigned EBS spectrum in rural areas of the country. Although counties differ in size, the long history of larger-area, site-based licensing in EBS, a large number of incumbents licensed in 35-mile GSAs, and the desire to close gaps between GSAs makes future licensing conducive to a county-based approach.⁴⁵ In addition, WISPA notes that the maximum power level for 2.5 GHz operations is higher than the maximum power level for CBRS, which results in different deployment models – 2.5 GHz spectrum is generally better suited for conventional, wide-area mobile and fixed coverage, whereas CBRS networks will be better suited for small cell (and small area) capacity on a shared basis. In sum, new EBS licenses and counties are a good match.

4. The Commission Should Adopt Rules To Encourage Robust Bidding By Small Providers

Historically, the Commission has licensed EBS spectrum according to channel group. However, other than in a handful of waiver cases, the Commission has not granted EBS licenses since before it reconfigured the 2.5 GHz band in 2004 to, among other things, create for each of the five EBS channel groups, (a) three 5.5 megahertz contiguous channels, (b) one 6 megahertz channel separate from the other three channels, and (c) guard band channels separate from the other channels in the channel group. In crafting auction procedures, the Commission should consider the means by which it can encourage bidding by small providers in rural counties to

⁴⁴ As stated above, the Commission should automatically expand the GSAs of existing licensees to the county border before it conducts auctions for new 2.5 GHz spectrum.

⁴⁵ This is not the case with respect to CBRS, in which no licenses have been assigned. In the ongoing rulemaking proceeding involving CBRS, WISPA has strongly and consistently advocated for retaining census tract PALs. Absent the unique circumstances described above and the different technical rules, WISPA likely would prefer that future 2.5 GHz licensing be implemented at the census tract level.

acquire a sufficient amount of spectrum, generally understood to be at least two channel groups (a total of 45 megahertz). The rules must strike an appropriate balance between ensuring that bidders can acquire enough spectrum capacity to justify their investment in spectrum acquisition costs and high-throughput equipment and preventing any single entity from acquiring all of the available unassigned spectrum. WISPA recommends the following structure and rules for future licensing:

Auction Design

Where all EBS channels are available, the Commission should create four separate spectrum blocks, as follows:⁴⁶

- A1-A3 and B1-B3 – a 33 megahertz contiguous block of spectrum
- C1-C3 and D1-D3 – a 33 megahertz contiguous block of spectrum
- A4, B4, C4, D4 and G4 – a 30 megahertz block of contiguous spectrum
- G1-G3 – a 16.5 megahertz contiguous block of spectrum

By combining channels into contiguous blocks, winning bidders can avoid the problem of being stranded with an insufficient amount of spectrum (e.g., a single channel group). In addition, winning bidders can optimize operational efficiencies and generate more throughput than they can with non-contiguous spectrum blocks. Auctioning contiguous blocks also is conducive to the TDD deployments that have taken hold in the band. It therefore would be counterproductive, in the Commission's effort to rationalize spectrum that is at the heart of this proceeding, to auction spectrum according to the original four-channel plan that fails to take advantage of the benefits of contiguous channel blocks.

⁴⁶ These spectrum blocks do not include associated guard band (J and K channel) spectrum. For purposes of these Comments and convenience, the guard band channels would be included with the associated main channels.

Spectrum Aggregation

As an important element of this structure, in areas where all five channel groups are available at auction, no bidder should be permitted to acquire more than 63 megahertz of spectrum (not including guard band channels).⁴⁷ This rule is necessary to ensure that at least two bidders can acquire a meaningful amount of spectrum. In general, to serve a rural area with fixed service, a bidder would need access to 45 megahertz of 2.5 GHz spectrum to justify the costs of acquiring equipment and deploying service. It is not necessary for an operator to hold all 112.5 megahertz of spectrum – in some cases on top of the BRS spectrum rights it may hold – to provide robust service to the public in rural areas.

Without imposing a reasonable limitation on the amount of spectrum a single bidder can acquire, it is conceivable, if not likely, that a single, large entity could acquire all available 2.5 GHz spectrum in an area. In this scenario, smaller entities – those best situated to serve rural areas – would be shut out, diminishing competition among providers or restricting deployment to a single use case (e.g., fixed or mobile). Indeed, without imposing spectrum limits, smaller entities may be dissuaded from participating at all, believing that the cost to compete for spectrum will be too high for them to fulfill a business plan predicated on deploying fixed service with less spectrum to sparsely populated rural areas. By ensuring that there will be at least two auction winners in a given market, the Commission can better promote choice, innovation, and competition. These objectives will lead to differentiated service offerings, better

⁴⁷ In counties where some of the EBS channels are licensed and not all five EBS channel groups are unassigned, the Commission should follow the structure described above as best as possible. If, for instance, Channels A1-A4 are licensed, then Channels B1-B3 would be auctioned without Channels A1-A3 and Channels B4, C4, D4 and G4 would be auctioned without Channel A4.

performance, and lower prices – consumer benefits that would not be present if a single company controlled all of the spectrum.⁴⁸

Adopting limits on the amount of spectrum a single bidder can acquire would be consistent with rules the Commission has adopted in other services. For instance, in adopting its CBRS rules in 2015, the Commission imposed a 40-megahertz limit on the amount of PAL spectrum a single entity can hold, stating that:

A spectrum aggregation limit of 40 megahertz will ensure availability of PAL spectrum to at least two users in those geographic areas where there is the greatest likelihood of high demand for such spectrum. . . . Allowing one licensee to acquire all seven PALs would limit choices to users interested in applications that would benefit from PAL access. Given the many potential scenarios and the nature of demand for PALs, as described, we believe the spectrum aggregation limit is appropriate, as it will likely foster competition and innovation in both PAL and GAA uses.⁴⁹

The Commission should adopt similar safeguards here to help achieve the identical goals of fostering competition and innovation, objectives that will stimulate investment in deploying broadband service to consumers in high-demand rural areas.

B. The Commission Should Adopt Its Proposed Performance Requirements

Assuming the Commission adopts county-based licensing consistent with Section II.A above, the Commission also should adopt the performance requirements it proposes in the *NPRM*.⁵⁰ For fixed point-to-multipoint services, licensees would be required to demonstrate coverage to 50 percent of the population at an interim benchmark and 80 percent of the population at a final benchmark. WISPA suggests that the interim benchmark occur at five years

⁴⁸ In counties where an entity already holds a significant amount of BRS and/or EBS spectrum, the Commission should consider imposing restrictions on the amount of additional spectrum, if any, such entity should be permitted to acquire through the competitive bidding process.

⁴⁹ *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959, 3999 (2015).

⁵⁰ See *NPRM* at 18, ¶ 54.

(the mid-point of the license term) and the final benchmark occur at license renewal. To encourage compliance, a licensee that does not meet the interim benchmark should have its license term and final benchmark showing reduced to eight years.

WISPA also believes that the renewal and permanent discontinuance rules the Commission recently adopted should apply to future county-based 2.5 GHz licenses.⁵¹ The rules recommended above would generally harmonize the regulatory regime for future 2.5 GHz licenses with other commercial wireless services consistent with the recent rule changes, so there is no reason to adopt a new standard.

Conclusion

WISPA appreciates the Commission's efforts to breathe new life into the 2.5 GHz band. In many rural areas of the country –the same rural areas where broadband choice is lacking – this band has remained fallow for too long, and circumstances have evolved over time that compel a fresh look at how this valuable spectrum resource can be best put to use. To promote flexibility and efficient use of existing licensed spectrum, the Commission should expand GSAs to county borders with a reasonable limiter to prevent windfall geographic expansion and should eliminate antiquated usage and leasing restrictions that have hampered commercial investment and deployment. Carrying these concepts forward, the Commission should auction unassigned spectrum by county, with reasonable limitations on the amount of spectrum a bidder can acquire

⁵¹ See *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*, Second Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 8874 (2017).

in order to promote rural broadband deployment and competition. By adopting these recommendations, the Commission can empower rural broadband providers to acquire the spectrum they need to help bridge the digital divide.

Respectfully submitted,

**WIRELESS INTERNET SERVICE
PROVIDERS ASSOCIATION**

By: /s/ Claude Aiken
Claude Aiken, President/CEO

Stephen E. Coran
Lerman Senter PLLC
2001 L Street, NW, Suite 400
Washington, DC 20036
(202) 416-6744
Counsel to the Wireless Internet Service Providers Association

August 8, 2018