

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

In the Matter of	)	
Expanding Flexible Use of the 3.7 to 4.2 GHz Band	)	GN Docket No. 18-122
Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz	)	GN Docket No. 17-183
Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission's Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3700-4200 MHz Band	)	RM-11791
Fixed Wireless Communications Coalition, Inc., Request for Modified Coordination Procedures in Band Shared Between the Fixed Service and the Fixed Satellite Service	)	RM-11778

**COMMENTS OF FRONTIER COMMUNICATIONS  
CORPORATION AND WINDSTREAM SERVICES, LLC**

Frontier Communications Corporation (“Frontier”) and Windstream Services, LLC (“Windstream”) hereby submit comments to the *3.7 to 4.2 GHz Notice of Proposed Rulemaking (“NPRM”)*.<sup>1</sup> Between the two companies, Frontier and Windstream have successfully expanded broadband to millions of rural Americans and are eager to continue bringing faster broadband to millions more. Our companies believe that smart rules that enable fixed point-to-multipoint deployments would provide another key tool in the toolbox to reach the hardest to serve rural Americans. By moving forward with its proposal to promote fixed point-to-multipoint in the upper portion of the 3.7-4.2 GHz band and by adopting sufficiently granular license sizes, such

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<sup>1</sup> *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, Order and Notice of Proposed Rulemaking, GN Docket No. 18-122, FCC 18-91 (July 12, 2018) (“*NPRM*”).

as census tracts, for any licensed spectrum, the Commission can accomplish its dual goals of promoting 5G leadership and closing the digital divide.

**I. FRONTIER AND WINDSTREAM HAVE EXPANDED RURAL BROADBAND TO MILLIONS OF RURAL AMERICANS AND SMART WIRELESS RULES CAN HELP BOTH COMPANIES BUILD ON THAT TRACK RECORD.**

Our companies have an extensive track record in bringing broadband to rural Americans, particularly in rural areas to which other large internet providers will not build. Between the two companies, Frontier and Windstream are in the process of investing more than three billion dollars to bring broadband to more than a million homes and businesses (representing almost two and a half million Americans) through year-end 2020 as part of Phase II of the Connect America Fund (“CAF”) program. We look forward to continuing expanding on these great successes, and as we have explained in other Commission dockets, smart wireless rules can help fuel further rural broadband deployment in the hardest to reach places.<sup>2</sup>

As part of this rural broadband expansion, Frontier and Windstream are busy deploying wireless broadband, including using mid-band spectrum. For example, Windstream has announced that it is offering fixed wireless to more than 350,000 businesses in 50 markets<sup>3</sup> and offers fixed wireless broadband to thousands of rural households.<sup>4</sup> Similarly, Frontier’s Chief

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<sup>2</sup> See, e.g., Comments of Frontier, Windstream, and Consolidated, GN Docket No. 17-183 & RM-11791 (Oct. 2, 2017) (“*Mid-Size ILECs 3.7-4.2 Comments*”); Comments of Frontier, Windstream, and Consolidated, GN Docket 17-258 (Dec. 28, 2017) (“*Mid-Size ILECs CBRS Comments*”).

<sup>3</sup> See Carl Weinschenk, *Windstream Fixed Wireless Now Available to More Than 350,000 Businesses*, Telecompetitor (Sept. 12, 2018), <https://www.telecompetitor.com/windstream-fixed-wireless-now-available-to-more-than-350000-businesses/>.

<sup>4</sup> Mike Dano, *Windstream Peels Back the Curtain on Its Fixed Wireless Deployments*, FierceWireless (May 7, 2018), <https://www.fiercewireless.com/wireless/windstream-peels-back-curtain-its-fixed-wireless-deployments> (explaining that Windstream is offering wireless

Financial Officer has explained, Frontier “deployed two markets in 2017” and “has plans to deploy another 15 to 20 markets in 2018” with a “plan is to cover about 30,000 households by the end of the year.”<sup>5</sup> Frontier is testing 3.5 GHz CBRS spectrum<sup>6</sup> and remains eager for that spectrum – both licensed and unlicensed – to become available.

To the extent the Commission can offer more spectrum that accommodates fixed point-to-multipoint wireless, the Commission can help accelerate these types of rural investments and bridge the digital divide.

## **II. MID-BAND SPECTRUM ALLOWING FOR FIXED POINT-TO-MULTIPOINT DEPLOYMENTS COULD GREATLY EXPAND BROADBAND AVAILABILITY AND SPEEDS IN RURAL AMERICA.**

Frontier and Windstream wholeheartedly support the Commission's proposals regarding fixed-point-to-multipoint use in the band and believe the Commission is asking the right questions.<sup>7</sup> Mid-band spectrum, particularly the 3.7-4.2 GHz band, is prime spectrum for rural fixed wireless broadband deployment. This spectrum enables high-bandwidth applications while still allowing for non-line-of-sight deployments over considerable distance.

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broadband to thousands in Iowa and Oklahoma and is looking at further deployments in locations in Missouri, Nebraska, and elsewhere).

<sup>5</sup> Frontier Communications, *Q1 2018 Results – Earnings Call Transcript* (May 1, 2018), available at <https://bit.ly/2LlzZMb>; see also Perley McBride, CFO, Frontier Communications, *Interview at Goldman Sachs Annual Communacopia Conference* (Sept. 12, 2017), available at <http://bit.ly/2xeHb1a> (explaining “[Frontier] see[s] [wireless] as another opportunity to . . . create a better broadband product” in rural America).

<sup>6</sup> See Frontier Communications Corporation, Experimental License, File No. 0264-EX-CN-2018 (granted June 6, 2018).

<sup>7</sup> See *NPRM* ¶¶ 116-32.

While we understand that certain existing users may be concerned about harmful interference, we believe that productive coexistence with fixed wireless is possible. Frontier, for instance, relies on C-Band earth stations as the eighth largest multichannel video provider, but in our predictive judgment, we can work towards rules that protect existing users while unleashing the benefits of new productive uses. Fixed wireless is much more controlled and contained compared to mobile uses, which by definition are harder to contain, and we would share the band with existing stakeholders in a responsible and coordinated way.

Frontier and Windstream therefore support the Commission's proposal to segment allocations in the 3.7-4.2 GHz band and assign at least a portion of the band for fixed wireless use on a primary basis.<sup>8</sup> Recognizing that Fixed Satellite Service (FSS) and fixed wireless services are less likely to interfere with one another than with mobile services, the lower end of the band should be reserved for flexible use, while the upper portion of the band should be made available for fixed wireless and FSS users. This should result in minimal interference between fixed and mobile services, and at the same time promote provision of fixed wireless residential and commercial services on a nationwide basis. Going forward, the Commission should avoid allowing mobile into the upper part of this band, which would result in interference with fixed wireless and FSS.

The Commission should dedicate at least 320 MHz for point-to-multipoint fixed wireless use on a primary basis, just above the flexible use portion of the band. If only 40 or 100 MHz becomes available for fixed wireless, much of the band will go unused. And, even though interference between fixed wireless and FSS can be avoided through careful planning, reserving

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<sup>8</sup> *See id.* ¶ 119.

a 320 MHz swath of spectrum should reduce any remaining potential for interference, while also minimizing interference between mobile and FSS applications.

Working towards rules that enable fixed point-to-multipoint deployments is well worth any effort – fixed deployments rural areas could allow us to serve additional hard-to-reach locations and enable faster speeds to others. Based on our experiences, in certain of the hardest to reach, most expensive areas to serve, fixed wireless is another tool we could use to reach more locations or upgrade underserved locations with fast speeds (25/3 Mbps and faster – potentially much faster if there are significant amounts of spectrum available). Fixed point-to-multipoint is another effective way to leverage CAF’s investments in driving fiber closer to less-densely populated areas of the nation and to reach Americans who otherwise would be too far or difficult to connect to broadband.

With our companies already deploying fixed wireless, and with our extensive ongoing investments in rural America, our companies stand ready and eager to deploy more broadband in the most rural parts of our footprint as soon as additional spectrum (and associated equipment) become available.

### **III. GRANULAR LICENSE SIZES, SUCH AS CENSUS TRACT LICENSE SIZES, WOULD FOSTER BROADBAND DEPLOYMENT IN RURAL AREAS.**

The Commission asks about the appropriate geographic unit for any licensed spectrum.<sup>9</sup> Frontier and Windstream understand the compromise that lead the Commission to move from census tracts to counties in the CBRS band. However, that compromise prevented the

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<sup>9</sup> *Id.* ¶ 139.

Commission from testing the benefits of licensing spectrum on a more granular basis. It is past time for the Commission to try smaller census tract licenses, particularly in rural areas.

As Frontier and Windstream have explained, local exchange carrier footprints do not neatly match up with any existing license size; census tracts are sufficiently granular to allow more competitors, including local exchange carriers, in more areas. This is particularly true in rural areas, where spectrum has traditionally been underutilized by the largest providers. Testing the potential benefits from smaller license sizes – especially in rural areas – sooner rather than later will yield the most benefits for spectrum policy and bridging the digital divide.

Put differently, traditional mobile licensing schemes and license areas do not foster fixed wireless deployment and can impede rural broadband deployment if the spectrum remains underutilized. Even if mobile licensees are not actively using spectrum in a specific rural area, mobile companies are not interested in negotiating reasonable site-by-site access to fixed operators. This is not an attack on mobile companies – their business models likely do not align, for whatever reason, with subleasing site-by-site fixed wireless deployments. Based on our experiences, we suspect the costs of such individual negotiations may be too great to attract the attention of mobile providers with so many competing business priorities.

#### **IV. IMMEDIATELY UNLEASHING THE 3.7-4.2 GHZ BAND FOR RURAL FIXED WIRELESS WOULD FURTHER THE COMMISSION’S AND CONGRESS’S PRIORITIES IN CLOSING THE DIGITAL DIVIDE.**

Unleashing this spectrum on an accelerated basis in rural areas would further the Commission’s goal of closing the digital divide, including with programs such as CAF. The Commission, through the CAF program, has already identified the areas where fixed broadband deployment is uneconomic, and it is investing \$4.5 billion annually to encourage buildout in

those areas – over \$500 million alone with the carriers that are making this filing.<sup>10</sup> Enabling fixed point-to-multipoint broadband deployments in the very near term would greatly further those goals by providing another important avenue for reaching those hardest to serve Americans.

At the same time, Congress and the Commission have also been focused on new, innovative solutions for closing the rural digital divide, discussing the possibility of investing auction proceeds towards rural buildout.<sup>11</sup> Immediately enabling rural fixed point-to-multipoint deployments is entirely consistent with this policy – dedicating rural spectrum or proceeds from spectrum to rural deployment. By providing the means for fixed broadband deployments and granting targeted spectrum rights exactly where needed most, the Commission will enable carriers to provide faster speeds to more customers.

It is well documented that mobile carriers do not use spectrum as intensively in high-cost areas.<sup>12</sup> Chairman Pai has explained that a “wireless carrier may never build out to [rural high-cost] areas if it’s never required to do so, even though its exclusive license prevents anyone else

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<sup>10</sup> See, e.g., *2011 USF/ICC Transformation Order* ¶ 18.

<sup>11</sup> See Remarks of FCC Commissioner Ajit Pai, *A Digital Empowerment Agenda*, The Brandery, Cincinnati, Ohio (Sept. 13, 2016) (“*Chairman Pai Digital Empowerment Remarks*”), <http://bit.ly/2pluTEe>; AIRWAVES Act, S.1682 (2017) (“[T]he Commission shall allocate 10 percent of the proceeds from each system of competitive bidding conducted under this Act for the deployment of wireless infrastructure in areas that the Commission has determined are underserved or unserved with respect to wireless broadband Internet access service.”), available at <https://www.congress.gov/bill/115th-congress/senate-bill/1682/text>.

<sup>12</sup> See, e.g., *Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 2152 ¶ 1 (2017); *Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless Including Commercial Mobile Services*, Nineteenth Report, 31 FCC Rcd 10534 ¶¶ 40-43, 99 (2016).

from building out to that same area with that same spectrum.”<sup>13</sup> Given the relatively less intensive mobile usage in rural areas, enabling fixed point-to-multipoint broadband makes perfect sense for the 3.7-4.2 GHz band and will accelerate the delivery of broadband to rural America.<sup>14</sup>

## V. CONCLUSION.

As the Commission is making substantial CAF investments to extend broadband to unserved rural Americans, it has an opportunity to accelerate those multi-billion-dollar investments to unleash faster broadband for even more rural Americans. Enabling point-to-multipoint fixed broadband deployments would pay great dividends for rural America.

Respectfully submitted,

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<sup>13</sup> *Chairman Pai Digital Empowerment Remarks.*

<sup>14</sup> Reply Comments of Alphabet Access, RM-11791 at 6 (Aug. 22, 2017) (explaining that “many point-to-multipoint operations will be in the remote, unserved areas where fixed service is needed most,” while mobile carriers are more likely to use spectrum for “capacity improvements in urban areas”).