Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)
	)
Inquiry Concerning the Deployment of Advanced	) GN Docket No. 22-270
Telecommunications Capability to All Americans	)
in a Reasonable and Timely Fashion	)

COMMENTS
OF
WTA – ADVOCATES FOR RURAL BROADBAND

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TABLE OF CONTENTS

SUMMARY

WTA – Advocates for Rural Broadband ("WTA") emphasizes that universal broadband deployment constitutes the essential prerequisite for progress toward Section 706's advanced telecommunications capability goals, including the other goals of affordability, adoption, availability and equitable access. It supports the Commission's proposed current fixed broadband speed benchmark of 100/20 Mbps as a temporary transitional measure that is consistent with the Infrastructure Investment and Jobs Act ("Infrastructure Act"), the National Telecommunications and Information Administration's ("NTIA's") Broadband Equity, Access. and Deployment ("BEAD") Program and the Commission's own Enhanced Alternative Connect America Cost Model ("Enhanced ACAM") program. More important, WTA commends the Commission for recognizing that both downstream and upstream broadband speed demands and usage are growing rapidly beyond 100/20 Mbps, and that adoption of a long-term fixed broadband speed goal of 1 Gbps/500 Mbps or better is needed.

WTA notes that the fiber-to-the-home ("FTTH") facilities used predominately by rural local exchange carriers ("RLECs") and others to provide 100/20 Mbps service are scalable and hence able to be upgraded to higher download and upload speeds (including symmetrical service) more expeditiously and economically than alternative technologies as customer needs and demands grow and evolve. In fact, the Rural Utilities Service's ReConnect Program and the Department of Treasury's Capital Projects Fund already require recipients to provide symmetrical 100/100 Mbps broadband service.

The importance and long-term advantages of scalability, Gigabit speeds and symmetrical service require the Commission to re-examine its principle of "technological neutrality" and to update it to include consideration of long-term differences in the advantages and disadvantages of various technologies (including significant future upgrade, construction, reconfiguration, speed, capacity and/or congestion differences).

Continuing predictable and sufficient high-cost USF support is necessary to keep rural broadband service rates at affordable levels. Even with the technical and economic advantages of scalability, there will still be some construction and upgrade costs if fiber optic facilities are damaged by weather, animals and natural disasters, or need to be replaced at the end of their useful lives. In rural areas, per-customer operating expenses remain high, particularly maintenance costs due the difficulties of locating and repairing problems along lengthy trunks and lines, as well as the time and cost of the truck rolls needed to respond to outside plant issues and customer trouble calls. Moreover, as broadband speeds and usage grow, operating expenses for middle mile transport and cybersecurity are increasing rapidly.

In addition, affordability of broadband service for low-income households can be improved and adoption increased if the Affordable Connectivity Program ("ACP") program is funded on a sufficient and predictable long-term basis.

Finally, achievement of the Section 254 and Section 706 high-speed broadband deployment and affordability mandates and goals, plus compliance with the non-discrimination provisions of Section 202(a) of the Act, will greatly accelerate progress toward the achievement of the remaining accessibility, adoption and equitable access goals.

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WTA – Advocates for Rural Broadband ("WTA") submits its comments in response to the Commission's *Seventeenth Section 706 Report Notice of Inquiry*, FCC 23-89, released November 1, 2023, in the referenced proceeding ("*NOI*").

WTA is a national trade association that represents more than 370 rural local exchange carriers ("RLECs") that provide voice and broadband services to some of the most rural, remote, rugged, sparsely populated and expensive-to-serve areas of the United States.

WTA's members have long been working hard to advance the Section 706 goals of universal service for advanced telecommunications capability in their rural service areas. At this point in time, all five broadband universal service goals are important, but universal broadband deployment constitutes the essential prerequisite for progress toward the statute's affordability, adoption, availability and equitable access goals. Without the construction, operation, maintenance and continuing upgrade of the underlying reliable high-speed broadband networks needed to serve all Americans, it will not be possible to fully attain the remaining affordability, adoption, availability and equitable access goals.

WTA agrees that the Commission should at least adopt the same fixed broadband speed benchmark of 100/20 Mbps[1] that was employed by Congress in the Infrastructure Investment and Jobs Act ("Infrastructure Act") and that has been adopted by the National Telecommunications and Information Administration ("NTIA") for its Broadband Equity, Access. and Deployment ("BEAD") Program and by the Commission itself for its Enhanced Alternative Connect America Cost Model ("Enhanced ACAM") program. WTA commends the Commission for recognizing that broadband speed demands and usage are already approaching and exceeding 100/20 Mbps, and for considering the adoption of a long-term fixed broadband speed goal of 1 Gbps/500 Mbps or better. WTA notes that the fiber-to-the-home ("FTTH") facilities that are used predominately by RLECs and others to provide 100/20 Mbps services to customer locations are scalable and hence able to be upgraded to higher download and upload speeds (including symmetrical service) more expeditiously and economically than alternative technologies as customer needs and demands continue to grow and evolve. WTA further notes that both the Rural Utilities Service's ("RUS's") ReConnect Loan and Grant Program and the Department of Treasury's Capital Projects Fund are already requiring recipients to provide broadband service at 100/100 Mbps symmetrical speeds to all the premises in the funded service areas.

WTA does not take a position regarding Commission adoption of upload and download speed benchmarks for mobile service. However, its members report that fixed and mobile broadband continue to be complementary services that are used to meet the differing needs and uses of rural and other customers. WTA notes that home, business and community Wi-Fi systems connected primarily by fiber optic facilities to underlying broadband networks are instrumental in enabling mobile broadband users to enjoy the flexibility to move about within their homes

[1] "Mbps" is a speed of megabits per second, while "Gbps" is a speed of gigabits (1,000 megabits) per second.

workplaces and communities while staying within their wireless usage allowances and keeping their mobile broadband charges within affordable levels.

Whether or not they are subject to Universal Service Fund ("USF") service obligations, WTA members and other RLECs construct and operate their broadband facilities to serve any locations they pass where customers order and subscribe to service. Sparsely populated rural areas have too few potential customers for RLECs not to advertise and make broadband service available to any locations they pass and to encourage the residents thereof to take broadband service tiers and packages that meet their needs. WTA is not aware of any RLECs that red-line or otherwise refuse to serve any locations or potential customers that they can reach.

WTA members serve high-cost areas but have made substantial efforts to provide broadband service at rates that are reasonably comparable to those available in less expensive and higher revenue urban areas. Continuing predictable and sufficient high-cost USF support is necessary to keep rural broadband service rates at affordable levels. Even with the technical and economic advantages of scalability, there will still be some construction and upgrade costs as fiber optic facilities are damaged by weather, animals and natural disasters, or need to be replaced at the end of their useful lives. In rural areas, per-customer maintenance costs will always be high due the difficulties of locating and repairing problems along lengthy trunks and lines, as well as the time and cost of the truck rolls needed to respond to outside plant issues and customer trouble calls. Moreover, as broadband speeds and usage continue to grow, middle mile and cybersecurity costs are increasing rapidly.

Finally, whereas high rural operating expenses affect affordability for all customers, there are some programs directed at improving the affordability of broadband for eligible low-income households. Although the Lifeline discount of $9.25 per month ($34.25 on Tribal Lands) is not

sufficient to render most broadband service tiers affordable, the short-term Affordable Connectivity Program ("ACP") provides more substantial discounts. Some WTA members are required to participate in the ACP program, while many others do so voluntarily. ACP or similar programs will have a much more substantial impact on broadband affordability if they are sufficiently and predictably funded on a long-term basis.

Universal Broadband Deployment

A. Fixed Broadband Service

The universal deployment and upgrade of reliable and high-speed broadband networks and services constitutes the essential precondition for achievement of the Section 706 goals in rural areas. When a rural residential or business location is passed and is capable of being served by broadband network facilities that provide advanced telecommunications and information services that are reasonably comparable to those provided in urban areas and that are available at rates that are reasonably comparable to rates charged for reasonably comparable services in urban areas, the remaining Section 706 affordability, adoption, availability and equitable access goals can be much more readily addressed and achieved. The most pressing problem at this time is that the broadband speeds needed and demanded by rural customers, and that are reasonably comparable to the advanced telecommunications capabilities available in urban areas, continue to grow at an accelerated rate with no end in sight.

As the Commission is well aware, the broadband speeds supported by its USF high-cost mechanisms have increased rapidly during recent years from 4/1 Mbps to 10/1 Mbps to 25/3 Mbps to the 100/20 Mbps speed recently adopted for the Enhanced ACAM program. No informed observer expects the rapid upward trend in broadband speeds to slow or plateau at the 100/20 Mbps

level, and in fact increasing numbers of RLECs and other service providers are already offering Gigabit or Multi-Gigabit download speeds as well as faster and (in increasing cases) symmetrical upload speeds.

OpenVault's *Broadband Insights Report 3Q23* indicates that 32.1 percent of broadband subscribers were on 1 Gigabit or higher speed tiers in the Third Quarter of 2023, a significant increase from 15.3 percent a year before. During the same Third Quarter of 2023, 6.5 percent of broadband subscribers were on 500 to 900 Mbps speed tiers, 35.0 percent were on 200 to 400 Mbps speed tiers, and 15.8 percent were on 100 to 200 Mbps speed tiers. Only 10.7 percent were on speed tiers less than 100 Mbps, and that number had decreased 22 percent since the Third Quarter of 2022.[2] These speeds are predominately download speeds due to streaming usage, although other broadband uses such as gaming, social media and file transfers also entail increasing upload usage and demand. OpenVault's 3Q23 report notes that upstream data usage grew by 13.7 percent from 3Q22 to 3Q23, which was higher than the 10.9 percent growth in downstream data usage during the same period.[3]

The Fiber Broadband Association Technology Committee has projected peak downstream and upstream broadband bandwidth requirements for a household of four (4) people to be 293/203 Mbps in 2024, 396/302 Mbps in 2025, 601/529 Mbps in 2026, 709/633 Mbps in 2027, 1.182/1.100 Gbps in 2028, 1.658/1.570 Gbps in 2029 and 2.141/2.044 Gbps in 2030.[4] While some have challenged the accuracy of the Fiber Broadband Association projections,[5] it is very clear that

[2] OpenVault, *Broadband Insights Report 3Q23* at page 7, found at https://openvault.com/resources/ovbi (last visited November 26, 2023).
[3] *Id. a*t page 5.
[4] The Fiber Broadband Association chart presenting these projections was not readily found when sought on the Association's website, but can be found by itself and on several websites (including those of WTA and Allconnect) by searching "Projected Peak Broadband Bandwidth Requirements" on Google.
[5] See, *e.g.,* Joe Supan, *Report: Households will need 2 Gbps of broadband speed by 2030* found at https://www.allconnect.com/blog/broadband-speed-need-to-pass-2-gbps-by-2030 which includes the Fiber Broadband Association chart (last visited November 26, 2023).

100/20 Mbps is far from the ultimate downstream and upstream speeds that will be needed to achieve the reasonably comparable advanced telecommunications capabilities mandated by Section 706 for rural America within the current decade. In addition to increased usage of streaming, gaming, social media and file transfers, other uses such as tele-medicine and distance education services, increased Internet of Things ("IoT") monitoring, Artificial Intelligence ("AI") advances, augmented reality and virtual reality ("AR/VR"), and a host of other imagined and not-yet-imagined applications and other uses will keep downstream and upstream broadband speed demands increasing significantly for the foreseeable future.

The Commission has reasonably and appropriately proposed to increase the existing fixed broadband speed benchmark from 25/3 Mbps to at least 100/20 Mbps (*NOI,* para. 9). That is consistent with the Infrastructure Act and will enable compatibility and cooperation with the 100/20 Mbps service standards adopted for the NTIA BEAD program and the Commission's new Enhanced ACAM program. The Commission has also wisely and prudently sought comment on adopting a long-term fixed broadband speed goal of 1 Gbps/500 Mbps. That goal properly recognizes that both download and upload broadband speeds will continue to increase rapidly during the foreseeable future.

In fact, the recent COVID-19 pandemic has demonstrated the need for higher and increasingly symmetrical broadband upload speeds and benchmarks. With more and more employees working from home on a full or part time basis and using broadband for virtual meetings and other collaborations, upload speeds and usage demands have increased significantly and are continuing to do so. The COVID-19 quarantines also increased the usage and importance of upstream service and speeds for distance education and tele-medicine purposes, while IoT

monitoring and other developing and future broadband uses will require robust and reliable upload speeds as well as download speeds.

Both recent RUS ReConnect Program rounds and the Department of Treasury's Capital Projects Fund are already requiring recipients to provide broadband service at 100/100 Mbps symmetrical speeds to households and businesses. WTA also notes that several Rural Digital Opportunity Fund ("RDOF") auction winners have made bids that obligate them to provide an asymmetrical 1 Gbps/500 Mbps service throughout their service areas, but that the 500 Mbps upstream speed requirement thereof far exceeds current 1 Mbps, 3 Mbps and 20 Mbps upstream benchmarks.

A potential complication with respect to the proposed establishment of a current 100/20 Mbps fixed broadband speed benchmark and a long-term 1 Gbps/500 Mbps fixed broadband speed goal is that the Commission is currently implementing a new Enhanced ACAM program that will provide model-based or transitional support to 368 companies in 44 states during a term ending December 31, 2038 in return for service obligations to deploy broadband service at 100/20 Mbps speeds to all eligible locations by December 31, 2028. This program has the advantages of accelerating the current deployment of 100/20 Mbps broadband service and of providing predictable high-cost support and budgets. However, few believe that 100/20 Mbps will remain the reasonably comparable download or upload standard for advanced telecommunications and information services as of the end of 2028, much less by the end of 2038.

At some point during this period, the Commission may need to revisit the Enhanced ACAM program, and to increase both the required broadband service speed obligation and the amount of high-cost support needed to upgrade network facilities and operations to achieve it. The Commission will also need to address and determine broadband service downstream and upstream

speed benchmarks and associated future capital expenditure and operating expense support for the remaining ACAM I, ACAM II, High-Cost Loop Support ("HCLS") and Connect America Fund – Broadband Loop Support ("CAF-BLS") recipients as upgrades to the networks in their service areas become necessary to meet Section 254 reasonable comparability and Section 706 advanced telecommunications capability requirements.

However, the scalability of FTTH technology can significantly reduce the time, effort, complexities and expense of upgrading broadband networks and services from 100/20 Mbps to higher, symmetrical and ultimately Gigabit speeds. "Scalability" means that FTTH facilities and networks can be upgraded to higher and higher and symmetrical downstream and upstream broadband speeds much more readily and economically than such upgrades can be accomplished by various alternative technologies as customer needs and demands increase.

Most WTA members and other RLECs – whether they elected Enhanced ACAM or remained on existing model-based or cost-based high-cost support mechanisms – have been deploying broadband and upgrading broadband speeds by incrementally extending fiber optic trunks and lines further and further into their service areas. Most RLECs recognize that they will need to deploy FTTH to most or all of their locations in order to provide 100/20 Mbps service to them.

The huge technical and economic advantage of FTTH scalability is that, once FTTH is deployed, the broadband speed and capacity provided to each FTTH customer can be increased and/or made symmetrical readily, rapidly and at much reduced incremental cost by changing the electronics at both ends of the customer's line. Some service upgrades require capital investments in new electronic equipment at the customer's location and a truck roll to install it; others can be implemented by remote adjustment of the customer's existing electronic device. Fiber does not

last forever; rather, the estimated useful life of most fiber optic lines is 25-to-30 years. The critical factor is that, once the basic fiber optic trunk, branch line and drop configuration of a FTTH broadband distribution network is constructed and deployed, it is not likely to require substantial replacement, modification, or other significant upgrade for decades in order to provide increased speeds as broadband service demands evolve. Rather, scalability means that the incremental capital and installation expenses of the electronic equipment needed to increase the broadband speeds offered on a deployed FTTH network comprise only a relatively small fraction of the capital costs of constructing the initial network, much less a new fiber network or a new or reconfigured wireless network. For example, one WTA member that has deployed a substantial amount of FTTH facilities throughout its network reports that approximately ninety-five (95) percent of its FTTH construction costs were for the basic fiber optic facilities and only approximately five (5) percent for the electronics.

The importance and long-term advantages of scalability require the Commission to re-examine its principle of "technological neutrality" and to update it to include consideration of long-term differences in the advantages and disadvantages of various technologies. Specifically, it is not good public policy to interpret "technological neutrality" to require a non-scalable or less scalable technology to be treated "equally" vis-à-vis a readily scalable technology for USF support or other purposes if there are significant future upgrade, construction, reconfiguration, speed, capacity and/or congestion differences between readily scalable versus the less scalable or non-scalable alternatives. Rather, the public interest and USF stewardship focus should be on determining what technology can meet the evolving broadband needs of a particular area most effectively, efficiently and economically in the long-term as broadband speed requirements approach and exceed the proposed 1 Gbps/500 Mbps goal. Likewise, "technological neutrality"

should not be used to limit or reduce the broadband download and/or upload speed and latency benchmarks (including symmetrical service requirements) needed by the public because some technologies cannot achieve them.

WTA is not advocating that any particular existing or future technology should be prohibited or excluded from seeking customers in any particular area. In fact, in some areas, fixed wireless and satellite services may qualify for high-cost USF support because they are the only technology able to meet the broadband needs of the area's residents. For example, there are some areas where customer locations are so remote or located in such rugged terrain that FTTH service is prohibitively expensive and fixed wireless or satellite technology is the only reasonably affordable alternative. In other areas, significant numbers of customers may reside in mobile homes and/or move locations regularly, with the result that fixed wireless and satellite technologies make more economic sense than FTTH drops that can too frequently become stranded investment.

However, unless and until fixed wireless technology becomes equally scalable, it makes no policy sense to deny or reduce USF support to a FTTH network because an alleged "competitive" fixed wireless carrier claims that it can currently provide 100/20 Mbps service to some locations in a FTTH service area.[6] The key questions are whether a fixed wireless "competitor" can provide the Gigabit and/or symmetrical downstream and upstream speeds that will be required in the foreseeable future; and, if so, whether it can do so without major capital investments in the reconstruction, reconfiguration, augmentation and/or upgrade of its existing basic distribution network.

[6] Moreover, in adjudicating challenges to the current availability of fixed wireless services, the relevant question is whether the potential customer at a challenged location can actually receive the fixed wireless service and not whether a theoretical service contour predicts that service is likely to be available. WTA members with experience in providing fixed wireless service are well aware that factors such as atmosphere, line-of-sight and foliage affect fixed wireless coverage in such a manner that the availability of reliable service at a particular location cannot be clearly determined unless and until a technician actually attempts an installation.

Although scalability is a key FTTH feature and value, WTA notes that FTTH technology is also very reliable and high quality. FTTH networks can handle large amounts and substantial surges of traffic without experiencing major congestion delays and quality degradation. FTTH networks are also not susceptible to service quality reductions or losses due to atmospheric, foliage and line-of-sight problems. Finally, buried fiber is much better able to withstand hurricanes, tornadoes, snow and ice storms, and similar natural disasters than aerial fiber, wireless towers, satellite dishes and other above-ground technology alternatives.

B. Mobile Broadband Service

WTA does not take a position regarding Commission adoption of upload and download speed benchmarks for mobile service.

WTA members report that fixed and mobile broadband continue to be complementary services that are used to meet the differing needs and uses of their rural customers. Fixed broadband is used in homes, offices and home offices for a variety of relatively stationary activities and projects including those that require large screens, printers and peripheral devices; send or receive relatively large amounts of data; and involve multiple participants at the location. Mobile broadband is more useful when the user is away from home or office or engaged in other activities for which the flexibility of maintaining access while moving about is more important than obtaining and processing more extensive or detailed information.

WTA notes that home, business and community Wi-Fi systems connected primarily by fiber optic facilities to underlying broadband networks are instrumental both in allowing multiple portable computers and tablets to be used at various locations within in a home, office or school; and in enabling mobile broadband users to enjoy flexibility of movement outside their normal

home, work or school locations while staying within their wireless usage allowances and keeping their mobile broadband charges within affordable levels.

Affordability

A primary purpose of USF programs has long been to keep voice and now broadband service rates affordable for all Americans, and reasonably comparable in rural and other high-cost areas to the rates charged for similar services in urban areas. Hence, the Commission's Section 706 inquiry and report should also focus upon the need for continuing high-cost support to achieve and carry forward Section 254's affordability mandates as well as Section 706's advanced telecommunications capability requirements.

While FTTH scalability enables broadband speed upgrades to be implemented more expeditiously and economically than various alternative technologies, there will still be some necessary capital expenditures for construction and upgrades – for example, if fiber optic facilities are damaged by weather, animals and natural disasters; or need to be replaced toward the end of their normal 25-to-30-year useful lives. Moreover, per-customer maintenance costs in rural areas are generally significantly higher due to the need to monitor and maintain the lengthy trunks and lines needed to deliver service, the rugged terrain and/or harsh weather that can disrupt service, and the long and time-consuming truck rolls needed to find the source of outages and to respond to customer trouble calls. Finally, and perhaps most important for Section 706 analyses of affordability, there are significant costs – for example, middle mile and interconnection costs and cybersecurity costs – that are increasing rapidly as broadband usage and traffic grows and that must be recovered either from high-cost support mechanisms or from increases in customer broadband service rates.

Middle Mile and Interconnection. The current and projected increases in broadband speeds and usage discussed above are accompanied by the associated burgeoning of middle mile traffic and costs. Whereas some RLECs have been able to reduce their middle mile costs somewhat via their ownership of interests in state or regional fiber transport rings or networks that aggregate and deliver traffic to and from certain Internet points, many other RLECs must lease middle mile circuits or purchase middle mile transport from unrelated entities. It is not yet clear how successful NTIA's $1.0 billion Enabling Middle Mile Broadband Infrastructure Program will be in deploying improved middle mile transport alternatives and/or in controlling or decreasing the middle mile transport costs of RLECs and other small Internet Service Providers ("ISPs"). A further complication is that some of the larger Internet backbone providers are beginning to require traffic to be exchanged with them at a small number of urban locations – an interconnection arrangement that is likely to result in substantial increases in middle mile transport distances and costs. As the costs of middle mile traffic and interconnection continue to become a larger and larger portion of broadband operating costs, the Commission's statutory mandates and goals to ensure affordable rates for broadband customers are going to require it to exert increased regulatory control over middle mile and broadband interconnection alternatives and pricing and/or to provide substantial additional USF support for the recovery of middle mile costs.

Cybersecurity. Cybersecurity is a second category of operating expenses that is growing rapidly with no end in sight as broadband speeds and usage increase. WTA and its members are painfully aware that the massive benefits and opportunities of broadband are unfortunately accompanied by temptations for domestic and foreign hackers to engage in criminal intrusions and activities. All WTA members and other RLECs are currently subject to the Commission's Customer Proprietary Network Information ("CPNI") requirements as well as the conditions of

their cybersecurity insurance policies. Many RLECs, including Enhanced ACAM participants, are required to adopt and implement cybersecurity plans based significantly on National Institute of Standards and Technology ("NIST") standards and recommendations, and may also ultimately become subject to Cybersecurity and Infrastructure Security Agency ("CISA") programs and requirements.

WTA members and other RLECs understand the importance of cybersecurity and are working to protect their networks and the customer data in their possession. However, RLECs have relatively small staffs, and may have a difficult time recruiting and retaining experienced cybersecurity professionals. Also, given that many large corporations and government agencies that have spent large sums on cybersecurity systems and staffs have been unable to prevent their data from being hacked and stolen, RLECs are struggling with the very high cost of the cybersecurity systems, consultants, personnel, and training needed to attain reasonable or effective cybersecurity protection for their networks and databases.

As with middle mile, the growing expenses of cybersecurity equipment, consultants, personnel, training and insurance costs comprise a large portion of broadband operating expenses that must be recovered in some manner. The Commission's statutory mandates and goals to ensure affordable rates for broadband customers are going to require it either to simplify the regulatory burdens and costs of cybersecurity (*e.g.,* by providing a single portal for all RLEC cybersecurity reporting, and by simplifying and standardizing as much as possible the cybersecurity reporting and monitoring procedures applicable to RLECs) and/or to provide substantial additional USF support for the recovery of cybersecurity costs.

Low Income. Whereas high maintenance, middle mile, cybersecurity and other operating expenses affect affordability for all rural customers, there are some programs directed at improving

the affordability of broadband for eligible low-income households. The Lifeline discount of $9.25 per month ($34.25 on Tribal Lands) is not sufficient to render most broadband service tiers affordable. However, the short-term Affordable Connectivity Program ("ACP") provides more substantial discounts. Some WTA members are required to participate in the ACP program, while many others do so voluntarily.

ACP or similar programs can have a much more substantial and positive impact on broadband affordability and adoption if they are funded sufficiently and predictably on a long-term basis. The current short-term ACP program that will terminate on relatively short notice if Congressional funding is not renewed or extended has discouraged participation by both eligible households and carriers. Participating WTA members are concerned that they will suffer significant harm to the local goodwill they have earned over decades if they have to terminate service to ACP recipients that cannot afford to continue their broadband service after ACP funding ends.

Availability and Adoption

WTA believes that expeditious and economical broadband deployment and speed upgrades (predominately with scalable FTTH technology), sufficient and predictable USF support for traditional and broadband-related capital expenditures and operating expenses, and sufficient and predictable long-term low-income customer support programs will successfully address the major portion of the Section 706 availability and adoption goals.

WTA members and other RLECs construct and operate their broadband facilities to serve any locations they pass where customers order and subscribe to service. Sparsely populated rural areas have too few potential customers for RLECs not to advertise and make broadband service

available to any locations they pass and to encourage potential customers to take broadband service tiers and packages that meet their needs. RLECs do not red-line or otherwise refuse to serve any areas, locations or potential customers that they can reach.

The Commission could produce and distribute materials advertising the benefits and opportunities of broadband (plus materials listing good consumer cybersecurity practices and warning of ongoing scams). However, most advertising is more effectively and efficiently produced and targeted by service providers that have long served their communities and that are very familiar with their existing and potential broadband customers.

Equitable Access

WTA is still in the process of reviewing the Commission's recent *Report and Order and Further Notice of Proposed Rulemaking* (Implementing the Infrastructure Investment and Jobs Act; Prevention and Elimination of Digital Discrimination), FCC 23-100, released November 20, 2023. At this time, WTA reiterates that its RLEC members seek to provide broadband service to any locations they pass where residents order it, and do not red-line or otherwise refuse to serve any areas, locations or potential locations they can reach. In addition, WTA's RLEC members are common carriers that comply with the prohibitions against unjust or unreasonable discrimination, undue or unreasonable preferences, and undue or unreasonable prejudice or disadvantage in Section 202(a) of the Communications Act

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Conclusion

WTA emphasizes that universal broadband deployment constitutes the key Section 706 goal as well as the essential prerequisite for progress toward the other Section 706 goals of

affordability, adoption, availability and equitable access. It supports the Commission's proposed current fixed broadband speed benchmark of 100/20 Mbps as a temporary transitional measure that is consistent with the Infrastructure Act, NTIA's BEAD Program and the Commission's own Enhanced ACAM Program. More important, WTA commends the Commission for recognizing that both downstream and upstream broadband speed demands and usage are growing rapidly beyond 100/20 Mbps, and that adoption of a long-term fixed broadband speed goal of 1 Gbps/500 Mbps or better is needed.

WTA notes that the FTTH facilities used predominately by RLECs and others to provide 100/20 Mbps service are scalable and hence able to be upgraded to higher download and upload speeds (including symmetrical service) more expeditiously and economically than alternative technologies as customer needs and demands grow and evolve. In fact, the RUS ReConnect Program and the Department of Treasury's Capital Projects Fund already require recipients to provide symmetrical 100/100 Mbps broadband service. The importance and long-term advantages of scalability, Gigabit speeds and symmetrical service require the Commission to re-examine its principle of "technological neutrality" and to update it to include consideration of long-term differences in the advantages and disadvantages of various technologies (including significant future upgrade, construction, reconfiguration, speed, capacity and/or congestion differences).

Continuing high-cost USF support is necessary to keep rural broadband service rates at affordable levels. Even with the technical and economic advantages of scalability, there will still be some capital expenditures for construction and upgrade costs including circumstances where fiber optic facilities are damaged by weather, animals and natural disasters, or need to be replaced at the end of their useful lives. In rural areas, per-customer operating expenses remain high, particularly maintenance costs due the difficulties of locating and repairing problems along lengthy

trunks and lines, as well as the time and cost of the truck rolls needed to respond to outside plant issues and customer trouble calls. Moreover, as broadband speeds and usage grow, middle mile and cybersecurity costs are increasing rapidly.

Affordability of broadband service for low-income households can be improved and adoption increased if the ACP program is funded on a sufficient and predictable long-term basis.

Finally, achievement of the Section 254 and Section 706 high-speed broadband deployment and affordability mandates and goals, plus compliance with the non-discrimination provisions of Section 202(a) of the Act, will greatly accelerate progress toward the achievement of the remaining accessibility, adoption and equitable access goals.

Respectfully submitted,
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