Chairman Wicker, Ranking Member Cantwell, and Members of the Committee, I am Matthew Polka, President and CEO of the American Cable Association (ACA), and I want to thank you for inviting me to testify today on America’s Infrastructure Needs and more specifically our broadband infrastructure needs.

I can break down ACA’s overall assessment of broadband infrastructure in the United States and our needs into three parts. **First, overall the news is good.** Fixed and mobile broadband providers, including ACA members, are investing about $75 billion annually, and they should continue investing at approximately this same level for years to come. As a result, the performance and reach of their broadband networks have been greatly enhanced. Here, our top priority should be to do everything we can to ensure providers are not discouraged from continuing to make these investments. **Second, even though the news is good, public and private sector barriers exist that hinder deployments.** This unnecessary friction increases the costs and slows the speed of broadband deployments. Congress and the Federal Communications Commission (FCC) have already taken steps to address these problems, but more can and should be done. **Third, we need to effectively and efficiently close the digital divide so that all Americans have similar opportunities to access our broadband information highways and fully participate in our 21st Century economy and educational, social, and political activities.** Here too, Congress, the FCC, the Rural Utilities Service, and many States have acted, and we have made real headway, but again, more can and
should be done. Let me first review further where our broadband infrastructure stands today and then elaborate on each of the three points I just raised.

**ACA’s Assessment of the State of Broadband Infrastructure in the United States**

ACA’s more than 750 broadband and video service provider members, who pass more than 18 million homes in all areas of the country and provide service to approximately 7 million broadband subscribers, have great experience in deploying broadband networks. During the past six years, ACA members have invested more than $12 billion to upgrade and expand their networks, in both rural areas and as overbuilders bringing competition in urban areas, and they plan to continue to spend billions each year to meet the ever growing demands of their subscribers for real-time, high-speed access to the Internet and other IP services. Many ACA members have deployed Gigabit broadband service, and many more intend to do so this year.

ACA members are not alone in making such substantial investments. As I just discussed, fixed and mobile broadband providers are investing enormous sums annually in their networks and related businesses, with cable operators alone investing approximately $20 billion each year. These investments feed the two critical technologies for our broadband future – wireless 5G and wireline 10G. These technologies will work in tandem, with 10G not only connecting residents, business, and institutions directly but enabling 5G connectivity as well. That said, it is important to understand that while 5G wireless networks are critical to our nation’s future, advanced wireline networks will outperform wireless networks and provide the connectivity consumers and businesses will need as

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1 This investment would be greater if not for regulatory barriers, including those discussed herein and in ACA’s 2015 study on how rapidly rising video programming fees act as a drag on investment. See ACA, “High and Increasing Video Programming Fees Threatens Broadband Deployment” (2015), https://drive.google.com/file/d/0BxUDdYFi5gnEa2xJdnhwSThWUUE/view?usp=sharing.
more bandwidth intensive applications and content flow over broadband pipes. That is why any broadband infrastructure legislation needs to address both our 5G and 10G future.

The Committee also should understand that ACA members and other broadband providers are not just upgrading and expanding their networks in “served” areas, but they are using their capital to bring service to unserved areas. To date, ACA members alone have invested private funds to build out to more than 840,000 homes that the FCC would otherwise consider high-cost areas eligible for federal universal service support.
### ACA: By the Numbers

ACA members are investing in broadband networks, including in small cities and rural areas.

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<th><strong>Homes passed</strong></th>
<th><strong>18.2M</strong></th>
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<td><strong>Network capex</strong></td>
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<td><strong>In small cities and rural areas</strong></td>
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<td><strong>Homes not requiring federal subsidies</strong></td>
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**ACA’s more than 750 members pass 18.2M homes with high-speed broadband services.** ACA’s members include cable operators as well as municipal providers and rural telephone companies receiving USF support.

**ACA’s members have spent more than $10B on building out their networks and continue to invest approximately $1B annually.**

**ACA members’ networks have more than 300,000 miles of transmission lines, including more than 40,000 fiber miles.**

Nearly half of ACA’s homes passed are in America’s small cities and rural areas.

ACA members offer broadband to 840,000 homes that would otherwise be eligible for government broadband subsidies—saving taxpayers tens of millions of dollars a year.
These investments not only reduced the areas where federal universal support is needed, but they “freed-up” federal support going into these areas, which could be used to bring broadband to unserved areas that were not receiving any support.

The FCC too has taken significant steps by reforming its universal service programs to close the digital divide. As I will detail later in my testimony, the FCC’s high-cost programs alone, which award more than $4 billion annually, have already brought broadband service to many millions of homes in unserved areas, and they are certain to close the gap even further in the near future.

The Rural Utilities Service (RUS) also is providing through its ongoing programs substantial support to build broadband networks in high-cost areas. Appropriations for FY2019 will enable almost $30 million in broadband loans and provide for $30 million for Community Connect grants. These amounts are in addition to appropriations for the Telecommunications Infrastructure program, which will enable almost $700 million in loans. Moreover, in the 2018 appropriations, Congress provided an additional $600 million to RUS for broadband buildout in unserved areas over the next two years.

So, in brief, because of the enormous amount of capital investment by providers, the FCC’s reforms to its universal service programs, and the many RUS programs, over the past decade we have made tremendous progress in bringing fixed broadband service to all Americans. Notwithstanding the size and rural footprint of the country, more than 97% of American households, including about 90% of rural households, have access to fixed broadband service with speeds of 10 Mbps or greater. That is a 40% reduction in unserved households in just the past four years, leaving fewer than five million homes without access to broadband service at speeds less than 10 Mbps. Further, more than

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2 Between 2013 and 2017, the percentage of Americans with access to speeds greater than 25 Mbps increased from approximately 84% to 94% and in rural areas from 48% to 76% overall. See Federal Communications Commission, 2018
100 million homes have access to broadband speeds greater than 100 Mbps, and that number is growing significantly each year.

By 2020, the FCC’s current Connect America programs should reduce these five million unserved households even further, such that only about three million homes will be without fixed broadband service. And, when the FCC launches the Remote Areas Fund and the new RUS program gets underway, we should get much closer to bringing broadband to everyone.

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The Final Five Million Unserved Households

Private investment and government subsidies have reduced the number of unserved households by nearly half since 2012.


- Share of Unserved Households as % of US Households
- 7% in 2012, 4% in 2016
- 40% reduction of unserved households

Near-Elimination of Unserved Locations:

- The number of U.S. households with 10 Mbps or greater wireline broadband service has increased from 123M to 128M.
- This is largely due to private investment, including from ACA’s members.
- More than 2 million of the 5.3M remaining unserved households will receive service by 2020 due to the CAF.

Trends (1)

(1) The number of U.S. households with speeds greater than 25 Mbps increased from 118M to 123M. Within that group, the number of U.S. households with speeds greater than 100 Mbps increased from 90M to 103M.

Source: FCC Form 477, US Census, American Community Survey, Experian
Our current broadband “success” should be heralded, but more can, and should, be done. We should now move forward based on all that we have learned. We should acknowledge that in all areas, both served and unserved, providers continue to face barriers imposed by both the government and private entities that add cost to broadband builds, thereby reducing their reach and capabilities. Moreover, we need to do more to efficiently and effectively bring broadband to all Americans. Congress should address these issues in any broadband infrastructure legislation.

To that end, let me share with the Committee ACA’s four principles for our broadband future: (1) respect private investment; (2) remove barriers to deployment; (3) before adopting additional programs to close the digital divide, account for additional deployments in unserved areas resulting from the removal of barriers, the recently enacted tax law, and existing federal and state support programs; and (4) provide broadband subsidies efficiently.

**Principle #1: Respect private investment.** As I noted at the outset, overall broadband providers, both fixed and mobile, are spending some $75 billion annually on infrastructure, and there is every indication this level of spending will continue absent actions by the government that would discourage it. We, therefore, urge you and the federal agencies to refrain from imposing harmful new regulations on broadband providers where investment and deployment could be curtailed because the regulatory costs exceed their benefits. This is most important for smaller providers, who have far fewer resources to deal with government rules and regulations. In addition, the government should award any new government support only in areas where existing providers have not deployed infrastructure or where such deployments are unlikely in the near future.³ Nothing will undermine

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³ ACA notes that smaller local telephone companies have demonstrated, for the most part, competence in providing telecommunications service in high-cost, rural areas. They operate in fewer and much smaller service territories and also tend to be less diversified than the major telephone providers. Any action by Congress or the FCC to implement these principles should continue to account for the value these companies deliver.
our broadband future more than signaling to private investors that their returns on investment are
uncertain, or, even worse, in jeopardy.

**Principle #2: Remove barriers to deployment.** Building high-performance broadband
networks is costly, and ACA members tell us that there are a series of problems they face and actions
that you can take, without spending a penny, that will “move the deployment needle.” The chart on
page 13 below, which breaks down the total cost of deploying and operating fiber-to-the-home
networks, indicates the greatest deployment costs and should help you target your solutions. For
instance, network costs related to pole attachments account for approximately 13% of total cost of
ownership. That is a big number. Fortunately, last summer, the FCC adopted an order that reduced
many barriers ACA members face in seeking to attach to poles owned by investor owned utilities and
incumbent telecommunications carriers. That said, virtually every week we hear from members
about problems with pole attachments, so Congress and the FCC should be vigilant and conduct
regular oversight and then address attachment concerns that pose real threats to deployments.

Installing conduits and ducts is another significant cost of owning a wireline network.
Congress helped address this matter with the Broadband Infrastructure Deployment provision
contained in the MOBILE NOW Act passed last year.4 This provision will help lower the cost of
ownership by facilitating the installation of conduits and ducts by states in highway rights-of-way
when new construction and major upgrades are underway, rather than having to spend large sums
afterward to tear up roadways. That said, we urge Congress to further build upon last year’s
legislation to ensure that such cost saving practices are actually implemented.

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4 See Consolidated Appropriations Act, 2018, Pub. L. No. 115-141, 132 Stat. 348, Division P, Title VI (MOBILE NOW
Further, Congress has recognized that broadband providers, particularly in rural areas, require access to federal lands on reasonable terms to deploy their facilities. Specifically, it understood that often federal agencies take too long to approve access applications, which forestalls, and drives up the cost of, deployments. The MOBILE NOW Act addressed this problem by requiring federal executive agencies to be more responsive to requests from communications providers for access to easements, rights-of-way, and leases, and in other ways. Federal agencies are now implementing those Congressional directives, and we urge Congress to ensure they act consistent with the need to expedite access to federal lands.

ACA members also continue to encounter other barriers to their broadband deployments, including:

- ACA members have told us about challenges they face in both obtaining and maintaining access to rights-of-way owned by local governments. For instance, some local government entities charge or are seeking to charge cable operators for using the public rights-of-way to provide broadband service even though these operators already pay a fee for video access, and their networks impose no additional burden on the rights-of-way. As you well know, when you tax something, you only get less of it – and no one wants less broadband.

- ACA members also tells us that private entities limit and even prohibit access to rights-of-way. For instance, railroads often charge unreasonably high fees to install fiber over or under their rights-of-way. In fact, sometimes these fees are so unfair that

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5 See MOBILE NOW Act, § 606.
they block deployments entirely. Other times, railroads are very slow to grant rights. To date, only a few states have stepped in to regulate these fees or establish timelines for obtaining rights.

- ACA members also tell us that we are missing too many opportunities to permit them to access existing conduit and ducts and to share in the cost of and access to new conduit and ducts or new opportunities to install them. For existing conduits and ducts, our providers find that there is a lack of information about their location and availability, and even once they have such information, they find that installation fees and construction costs are frequently unreasonable. For new conduits and ducts installed by private entities, they recommend the government require a sharing process similar to “Dig Once.” That is, any provider opening a new trench to install conduit and ducts should be required to notify other providers of the opportunity to install their own facilities and share in the cost.

**Principle #3: Before determining unserved areas where new support programs should be provided, account for the additional deployments in unserved areas that will result from the removal of barriers, the recent tax law, and existing federal and state support programs.** By adopting this approach, we will ensure that we maximize use of limited federal funds. To that end, ACA has calculated that actions taken so far by the FCC to remove barriers to deployment and potential additional actions will lower the cost of network deployment sufficiently such that 1.2 million unserved homes will become suitable for broadband providers to spend private money to

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deploy hybrid fiber/coax or fiber-to-the-home broadband services\(^8\) — all without spending additional government funds. Removal of these barriers also will encourage providers using other technologies, including fixed wireless and DSL, to upgrade their networks and expand them into additional unserved areas.

In addition, further network investment is being propelled by the recent tax statute. The law permits broadband providers to “expense” their network investments immediately and cuts the corporate tax rate to 21\%, which already has resulted in providers increasing their capital spending. We expect this increased spending to continue. We estimate that the new tax law will turn more than 400,000 homes in unserved areas into economically viable areas ripe for private investors to build high-speed broadband or fiber-to-the-home services.

We also should recognize that the FCC is providing more than $4 billion annually to bring broadband to unserved and high-cost areas. Additionally, the broadband programs of the RUS provide tens of millions of loans annually for rural builds, and the Re-Connect broadband program launched by Congress last year has $600 million in funding for loans and grants over the next two years. States also are implementing their own support programs. By our calculations, the current federal Connect America programs alone, by 2020, should reduce the number of “unserved” homes by 2 million, and even more by later in the next decade, and RUS and state efforts will reduce them even further. In fact, it would be valuable for an agency like the National Telecommunications and Information Administration to report to Congress each year on the effect all federal and state programs have on reducing the number of unserved locations. In sum, the government is already well on its way to closing the digital divide, and it should take account of the gains that are being

\(^8\) ACA estimates that such deployments will create almost 20,000 new jobs.
achieved by removing barriers to deployment, the recent tax cut, and existing support programs before determining how much and where to spend additional funds to bridge the digital divide.
FCC’s CAF Programs Will Deliver High-Speed Broadband to Many Unserved Areas

CAF Phase II provides ~$1.5B/year to price cap incumbent carriers to deliver broadband in unserved areas; CAF Phase II Reverse Auction and the Remote Areas Fund, when implemented, will provide ~$280M/year in additional unserved price cap carrier areas and in other areas, many of which are very high-cost.

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USF, which totals about $10B annually for all programs, is funded through an assessment of about 17% on the amount customers’ pay for interstate telecommunications services.

(1) In 2016, some locations that receive subsidies already have performance greater than 10Mbps

Source: FCC, Cartesian
Principle #4: After removing barriers to deployment, accounting for the tax cut and current federal and state support programs, where unserved locations remain, the government should provide subsidies to bring broadband to these unserved locations and do so efficiently.

The FCC has essentially provided the roadmap for awarding support efficiently with the Connect America programs it initiated in its major reform in 2011. The FCC has reshaped and continues to refine these programs so that its limited support is awarded much more efficiently. It has sought to target support in price cap carrier territories only to unserved areas, and last year, it awarded for the first time fixed broadband support using a reverse auction. ACA believes you should adhere to the following guidelines in distributing any new money to close the remaining digital divide.

- **Provide subsidies for broadband only in unserved, high cost areas.** ACA supports the FCC’s current definition providing that an area is unserved if no provider offers 10/1 Mbps broadband service. While ACA understands the urge to “bid-up” these speeds, ACA cautions that we should not divert our attention from bringing service to those areas currently deemed unserved. In addition, any change in the definition of unserved must not result in any overbuilding of providers that are investing private capital. That would be especially counterproductive. Finally, you should keep in mind that as you increase the speed threshold for determining whether an area is unserved, because higher speed services costs more to deploy, you lower the number of locations that will receive service.

- **Limit the amount of federal support for broadband buildout in an area to account for subsidies provided by states, unless any additional broadband performance is required.** It would be inefficient and a waste of scarce federal support to enable recipients of such support to also receive state funding if they are
only required to meet the federal broadband public interest requirements. This is because the federal program already contemplates these requirements would be met. In the future, any federal program that provides support for unserved locations should account for any funding from a state program that provides support to achieve the same result. This might be done by requiring the recipient of funding from both programs to provide higher speed service or meet faster deployment deadlines. For instance, the FCC and New York State developed (and ACA supported) an approach where providers in that state could receive support from both the FCC’s Connect America program and New York State’s Empire State Development program to deploy broadband networks that are faster than those available under the FCC’s Connect America program alone. ⁹ Such an approach is a potentially valuable model for propelling higher performance networks sooner in unserved areas. But, absent such enhanced obligations, a recipient of federal support should not receive state support to provide the same service.

- **Use reverse auctions to distribute support for network deployments to maximize cost-efficiency.** Prior to 2011, the FCC awarded high-cost universal support only to incumbent telephone companies through a complex array of factors that were out of sync with how modern broadband networks are built and operated. The FCC also understood that bringing broadband to unserved areas would be very expensive and, to maximize use of its limited funding, it needed to award support much more efficiently.

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Last year’s reverse auctions demonstrated that they award support much more efficiently than using cost models -- lowering the cost of providing support to serve an area by approximately 70%. ACA thus urges that any new funding be given out using a reverse auction approach (as adjusted for the removal of barriers to deployment).

ACA has established its principles by learning from the experiences and expertise of its members and by seeing over the past decades policies that have – and have not – worked. From our conversations with Members of the Committee, you too understand what it takes to bring broadband to all Americans. At the end of the day, ACA’s principles will maximize consumer welfare, increase economic growth, and make communities throughout the country thrive. As for additional legislation, we urge the Committee to examine the approach we have just set forth. We believe it will enable you to drive broadband deployments in all areas of the country.

In closing, I want to commend the Chairman, Ranking Members, and other Members of the Committee for their intense and well-considered focus on accelerating high-performance broadband deployment to all Americans. ACA and its members stand ready to assist you in this endeavor.

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10 See Connect America Fund Phase II Auction Results, Rural Broadband Auctions Task Force, Federal Communications Commission, Open Meeting, September 26, 2018, [https://youtu.be/aHMVuMWtrG4](https://youtu.be/aHMVuMWtrG4) (presentation begins at 27:45). The reserve price for the auction as established by the cost model was $5 billion. The final awards totaled $1.49 billion. In addition, more than 50% of the locations were to receive service at speeds of at least 100/20 Mbps, which is far in excess of the speeds required for price cap carriers electing to receive support pursuant to the cost model.
MATTHEW M. POLKA -- President and CEO

Matthew M. Polka is responsible for the daily operations and affairs of the American Cable Association, a nearly 800-member national non-profit association dedicated to serving the interests of independent, smaller and medium-sized broadband, cable and phone businesses across the United States. The Association, whose cable, telco and municipal members serve more than 10 million broadband internet subscribers primarily in smaller/rural markets and competitive areas in all 50 states and in many U.S. territories, is the only group of its kind solely representing the concerns of such independent businesses before Congress, the Federal Communications Commission, other federal agencies and in the 50 states, where Matt has testified many times.

The primary purpose of the Association, founded in May 1993, is to help ACA Members stay competitive through a legislative and regulatory framework that (1) recognizes the unique economic circumstances of smaller and medium-sized independent communications businesses and their unique communities; (2) provides for regulatory and financial parity with potential competitors; and, (3) encourages access to financial markets for capital needs.

Matt joined the Association as its first president on May 1, 1997. Prior to joining the Association, he was the Vice President and General Counsel of Pittsburgh-based Star Cable Associates from 1990-97, one of the nation's top-100 multiple-system cable companies, which specialized in the construction, operation and management of smaller, independent cable television systems in seven states. Matt worked on the Board and Executive Committee of the Association as a volunteer from 1993-97, helping to establish ACA in Washington, and then joining in 1997 to create a full-time Members’ organization.

Matt is a 1982 honors graduate of West Virginia University in Morgantown, W.Va., where he received an undergraduate degree in journalism, magna cum laude, and was recipient of the Journalism School’s award for Outstanding Graduate in Journalism. He is also a 1986 graduate of Pittsburgh’s Duquesne University School of Law, where he was editor of the Law School Newsmagazine, JURIS, and recipient of the Law School’s Most Distinguished Graduate award.

In five years of private legal practice from 1986 through 1990, Matt specialized in civil litigation and corporate practice with the Pittsburgh law firms of Buchanan Ingersoll Professional Corporation and Thorp, Reed & Armstrong. In particular, since 1986 he has represented a number of independent communications clients in a variety of corporate transactions, contract negotiations and litigation matters.

Matt, frequent speaker throughout the communications industry, was named once again in 2018 a member of the CableFAX 100, and in 2009 was named a “Cable Television Pioneer,” one of the highest awards bestowed in the cable industry. Matt lives in the Pittsburgh area with his wife, Sharman, and their two daughters.