

Broadband: Deploying America's 21st Century Infrastructure

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Chairman Blackburn, Ranking Member Doyle, and members of the Subcommittee, thank you for inviting me to testify about the critical role that mobile broadband infrastructure has in modern life for Americans in all corners of this country. As Chairman Blackburn astutely noted, “broadband is the infrastructure issue of this decade.” CCA wholeheartedly agrees. Broadband networks, and mobile broadband networks in particular, are analogous to the interstate highway system that transformed our economy in the 1950’s. The on and off ramps that these networks provide are essential to our economy, creating jobs, economic development, and opportunity that is instrumental to virtually every aspect of life. America’s dependence on mobile broadband increases every day. That is why today’s hearing is so important, as you know, and I am pleased to offer my testimony.

I am testifying on behalf of Competitive Carriers Association, the nation’s leading association of competitive wireless carriers. CCA is made up of nearly 100 carrier members ranging from small, rural providers serving fewer than 5,000 customers to regional and national providers serving millions of customers. CCA also represents almost 200 associate members – small businesses, vendors, and suppliers that serve carriers of all sizes.

Broadband infrastructure encompasses the towers, wires, conduit, spectrum, and other equipment and resources that power broadband networks. Broadband *is* infrastructure and infrastructure *is* broadband. The demand for mobile broadband in this nation has grown exponentially over the past few years, and will continue to grow at an astounding rate. A recent Cisco report found that mobile data use grew 63 percent in 2016 and 18-fold over the last five years. Looking ahead, data traffic will increase at least another seven-fold over the next five years. Putting this into practical terms, one CCA member reported that data traffic increased more than 3 times at the NFL® championship this year compared to last year’s game, and about 8 times more than the 2015 game. All of this demand

creates an ever-growing list of groundbreaking services, technologies and applications, from telehealth treatments and monitoring to public safety solutions, distance learning, and the Internet of Things.

Mobile broadband is a critical economic driver, and its role in economic development will be magnified following the evolutionary leap to 5G technologies. Qualcomm projects that 5G will support 22 million jobs and generate up to \$3.5 trillion in revenue by 2035. Focusing on small and rural broadband providers, which comprise the vast majority of CCA's members, a recent report by the Hudson Institute states that the investments and ongoing operations of small rural broadband providers contribute \$24.1 billion annually to the nation's gross domestic product, with 66 percent (\$15.9 billion) of that amount benefiting urban areas. The report also found that rural broadband investment is an important driver of job growth, estimating that nearly 70,000 jobs can be attributed directly to economic activity of small, rural broadband providers. A CCA-commissioned study from a few years ago also confirmed an increase in median incomes across an entire state as broadband availability increased. This ongoing economic activity and investment is directly dependent on the ability of providers to buildout network infrastructure, and this buildout is contingent on sound, common sense infrastructure policies. And now, we are expected to achieve full-fledged 5G networks in 2020.

Let me be clear – if we want to deploy broadband networks that will support 5G, we cannot wait to address broadband infrastructure challenges until 2020 or later. Chairman Pai recently committed to immediately instruct his staff to implement Section 7 of the Communications Act. CCA fully supports Federal Communications Commission (FCC or Commission) enforcement of the statutory one-year shot-clock imposed on new technologies and services, including new technologies and services advanced by sound broadband infrastructure policies that will lead to next generation deployments. Congress rightly recognized that government should not impede innovative progress that is in the public interest. Hence, Congress and the FCC must tackle broadband infrastructure challenges today to meet current and future

demands. While 5G will build on 4G LTE coverage, it is important to note that 5G is not a replacement for LTE, particularly in rural America.

Americans rely on high-speed mobile broadband service for their jobs, health care, schools, and much, much more. But there are many areas of the country where these services aren't available and as a result, the Americans and economy in those areas suffer. Industrial recruitment suffers and productivity declines. Lack of services will even harm home prices, and students in these areas may be unable to complete homework assignments. Delay in addressing broadband infrastructure challenges will continue to leave many Americans on the wrong side of the digital divide. Areas that remain unserved or underserved, particularly those in rural America, risk being left behind by today's technological revolution. CCA members are proud to serve challenging and high cost areas, but there is a long way to go to connect the entire country. Policies established by Congress and the FCC will play a significant role in whether rural America has access to the latest services or languishes behind the modern economy.

As a native of Southwestern Virginia, I experienced first-hand how robust mobile broadband services improve economic development in rural America. My hometown and the surrounding region is still underserved, and I am hopeful that efforts to support expanded deployment will fill those gaps. Speaking personally, I am pleased that Chairman Pai has made closing the digital divide a priority of his administration. There is no time to waste. For mobile broadband providers to build the infrastructure needed to close the digital divide between urban and rural America, Congress and the FCC must act quickly and adopt streamlined, common sense deployment policies and procedures that support buildout across the U.S. and particularly in rural America. And CCA fully supports creation of Chairman Pai's Broadband Deployment Advisory Committee (BDAC), which will provide advice and recommendations on how to accelerate the deployment of broadband by reducing and removing

regulatory barriers to infrastructure investment and, in turn, enhance the FCC's ability to carry out its statutory responsibility to encourage broadband deployment to all Americans.

The FCC, either through the BDAC or independently, should move quickly to provide immediate relief to these infrastructure challenges, and Congress should take the following steps to provide long-term certainty. First, Congress should include mobile broadband in any infrastructure bill. Second, Congress should pass legislation that improves the process for deploying facilities on federal lands. Third, Congress should pass legislation that reduces barriers to deployment that can result in prohibitive delays and expenses, including clarifying what "prohibit or have the effect of prohibiting" means for broadband deployment. Congress also should streamline and modify the historical and environmental review processes, reduce the bureaucracy across multiple government agencies associated with locating and modifying facilities, and establish "dig once" policies, once and for all. Fourth, Congress should act to rein in unreasonable fees charged by federal, state, local, and tribal entities to approve wireless facility deployment. Fifth, and most importantly, Congress and the FCC must base their decisions on data that accurately reflects on-the-ground mobile broadband user experience, standardized across the industry.

The right infrastructure policies will not only create jobs and drive economic development today by unlocking network investment and creating competition throughout the ecosystem, but also will pave the path for the United States to lead the world in 5G in the future.

Include Mobile Broadband Infrastructure in Any Legislative Infrastructure Proposal

President Trump campaigned on the need to update our nation's infrastructure, and he is right: our nation is in desperate need of an infrastructure overhaul. This package must include mobile broadband to fulfill the President's commitment and meet Congressional expectations, particularly in rural America. CCA was pleased to see a broad bipartisan group of Members of Congress, including a dozen members that serve on this Committee, convey that message to President Trump in a recent

letter, stating that “[a]s you consider the parameters of your infrastructure proposal to Congress, we write to urge you to include investments that will bring the benefits of broadband connectivity to rural America.”

Specially, the infrastructure proposal should include direct, long-term support for mobile broadband infrastructure prioritizing areas that are otherwise uneconomical to serve. The FCC should distribute this support because, as Chairman Pai recently noted, the FCC has a better track record than other agencies of preventing overbuilding and awarding support to projects that can deliver the intended services. CCA also supports tax incentives, especially rural-focused credits, to spur investment and deployment like those discussed in Chairman Pai’s Digital Empowerment Agenda. While certain tax credits should be included to support expanding and upgrading broadband infrastructure, like proposed Gigabit Opportunity Zones, there are instances where mobile facilities in rural America will never be profitable because of low population and the high costs of serving these areas. In these cases, tax credits may not go far enough to foster infrastructure investment. Only direct, predictable support will connect these communities, plain and simple. In addition to direct support and tax incentives, CCA supports preserving and expanding mobile broadband through utilizing bonus depreciation and/or immediate expensing. Broadly, CCA supports policies that create opportunities for greater and faster access to spectrum for mobile broadband use, with reduced fees and streamlined siting procedures.

Congress is currently considering several important legislative initiatives to spur broadband deployment. These bills should not be delayed due to a broader infrastructure bill and we urge Congress to take immediate action to pass these narrowly tailored bills. However, a broader infrastructure package could provide a vehicle for several standalone policy updates that can provide an immediate positive impact, building upon the progress Congress has made to break down barriers to deployment. Similarly, the FCC can and should move forward quickly to promote streamlined deployment of services. The FCC also should work in conjunction with Congress to codify streamlined

infrastructure policies and defer to Congress when certain infrastructure changes fall outside existing FCC authority.

Improve Access to Federal Lands

One of the most overlooked areas of infrastructure policy is access to federal lands. According to the Congressional Research Service, roughly 635-640 million acres of land – 28 percent of the United States' geography – are owned or managed by the federal government. As you might guess, access to federal lands is especially critical for rural carriers to provide service throughout their service territories. Serving these lands is not only important from a commercial or consumer perspective, but more so from a public safety perspective. Millions of Americans visit our parks and forests every year – we have seen repeatedly how mobile broadband and access to connectivity can help to save lives.

CCA represents members that provide service on federal lands today, and many more carriers that would like to. Unfortunately, all too often, CCA members express frustration about the hurdles they face when applying through federal agencies to deploy or upgrade facilities on federal lands. These experiences include lost or missing applications, applications that languish for years, inconsistent or undisclosed rules across and within agencies, redundant historical or environmental reviews, and inconsistent denials. Several CCA members were even forced to seek deadline waivers from the FCC tied to Universal Service Mobility Fund support because the awards required them to provide service on federal lands and the carriers could not overcome the delays. The unresponsiveness of government bureaucrats has created widespread regulatory uncertainty for our members. They have been unnecessarily hamstrung from providing high quality mobile broadband service in rural America. In many cases, providers are not getting the basic courtesy of a response from federal agencies, resulting in stalled, and sometimes abandoned plans to buildout in these areas. This is not an acceptable outcome.

The 2015 Broadband Opportunity Council report supported increased access to deploy mobile broadband on federal lands and facilities, and Congress and the FCC have long supported this goal. Now is the time to move forward with policies and procedures that improve access to mobile broadband and to harmonize and streamline procedures and processes across federal agencies. The Broadband Deployment on Federal Property Working Group recently released for comment a draft “standard treatment” to streamline deployment on federal lands. The document is a step in the right direction, but lacked several important provisions. For example, any document governing siting on federal lands should hold federal agencies to specific time frames or “shot clocks” to process siting applications and negotiate leases to build on federal lands and other real property, like historic landmarks. These shot clocks should be attached to a “deemed granted” provision. Inserting a “deemed granted” provision in infrastructure legislation is a vital component to ensure that shot clocks actually serve their intended purpose and government is responsive to rural providers, and ultimately to your constituents. Projects crossing the jurisdictions of more than one federal agency should be required to specifically designate a “lead” agency who will manage all project applications, fees and approvals. Small wireless facilities and their associated equipment also should be excluded from the rigors of a full Section 106 review.

Reduce Barriers to Mobile Broadband Infrastructure Deployment

The infrastructure hurdles faced by mobile broadband providers, both for base stations and small cells used for network densification, add unnecessary complexity and delays to broadband deployment. Carriers must navigate a myriad of steps to deploy new sites or to upgrade or maintain existing sites. The chart mapping the current process in Appendix A demonstrates the astonishing web of regulations, approvals, and fees carriers face to build or install infrastructure. While navigating this process can be problematic, these challenges become overwhelming when you factor in the costs to deploy small cells, and dramatic increase in the number of applications for sites. These onerous and often unnecessary steps slow private and public investment in our nation’s broadband infrastructure

and deprive consumers of the latest and greatest technologies, network speeds, and access to the applications that are vital to today's economy. It seems that government entities may need some education about the vast economic, public safety, and social benefits of mobile broadband so that deployment is a high priority for all government entities.

CCA has consistently supported efforts to streamline the policies that govern infrastructure deployment, which will facilitate mobile broadband deployment today, lay the groundwork for 5G services of tomorrow, and dramatically reduce time and opportunity costs for carriers to deploy in unserved or underserved rural areas, federal lands or anywhere lacking mobile broadband. Last Congress, this Committee worked on several proposals that tackled barriers and would help to achieve these goals. CCA continues to support these efforts, and encourages the Committee to advance the discussion draft bills to:

- streamline and accelerate historical review under the National Historic Preservation Act (NHPA) and environmental review per the National Environmental Protection Act (NEPA);
- streamline the application process to locate or modify facilities with federal agencies, including the Department of the Interior, the Forest Service, and the Department of Defense;
- establish deadlines for development and use of master contracts to site wireless facilities on federal property;
- clarify key terms and language in the relevant statutes to provide certainty and reduce deployment delays;
- establish an inventory of federal assets to construct or collocate broadband facilities; and,
- establish "dig once" policies.

Longer term, Congress should consider other policies that affect the ability to deploy mobile broadband services. That includes ensuring robust access to backhaul services, particularly as carriers densify networks while dealing with growing capacity demands. Additionally, Congress should consider updates to Section 224 of the Communications Act to support cost-effective wireless attachments on poles and in Rights-Of-Ways. As carriers densify their wireless broadband networks and handle increasing capacity demands, there will be an ever-growing reliance on additional backhaul services, including from fiber and other wireline services. Making it easier to expand competitive backhaul services will help streamline mobile broadband deployment. Equally important is timely access to pole attachments.

In addition, Congress should consider revising and updating “shot clock” requirements for decisions on applications on the state and local level, including “deem granted” provisions for instances of no response. CCA recently asked the FCC to interpret Section 332 of the Communications Act to shorten existing shot clocks to 30 days for collocations (currently 90 days) and 60-75 days for other permits (currently 150 days). However, it is fully within this Committee’s purview to establish timely response deadlines. Given the changing technological landscape trending toward small cell, DAS deployment and collocations, and the minimal, if any, impact that this type of equipment has on its surroundings, the FCC or Congress would do well to facilitate faster review of this equipment. Adopting a “deemed granted” remedy, whereby a siting application is deemed granted by operation of law if review is not completed within a certain time frame, is critical to ensuring these shot clocks function as intended.

Congress also should support streamlined procedures for small cells and distributed antenna systems. For small cell applications that include multiple substantially similar sites, “batched” review of applications or updated programmatic agreements that provide increased certainty to carriers also may alleviate demands on government employees who must process this growing number of applications.

Further, policymakers should be careful not to burden carriers with any new regulations that could stifle deployments. This includes new tower marking rules that must be promulgated later this year by the Federal Aviation Administration (FAA) as a result of the FAA Extension, Safety and Security Act of 2016. CCA agrees with Commissioner Mike O’Rielly that the scope of the tower marking requirements should be narrowed to appropriately capture risks for aviators and clearly exempt telecommunications towers to remove a potential barrier to deployment and increased expense for carriers.

Rein in Costs

CCA members understand that reviewing infrastructure applications take time and resources, and that there often are fees associated with this review. CCA fully supports paying justified costs for application review. That said, the current application fee structure and costs associated with pole attachments are in dire need of reform; fees are inconsistent, often unrelated to application review, and excessive. Excessive fees, especially fees attached to the Section 106 historical review process, can make deploying service cost prohibitive in rural America.

Congress or the FCC should clarify what is considered a fair, reasonable, and uniform fee, and ensure that application fees are administered in a competitively neutral and nondiscriminatory manner. Fees should be tied to the actual costs of reviewing siting applications and managing rights-of-way, and be publicly available for carriers as they consider the application process. In a recent filing at the Commission, CCA asked the FCC to limit costs by interpreting “just and reasonable compensation” under Section 253 of the Communications Act as limiting fees to recover reasonable costs of reviewing and issuing permits, and managing rights-of-way. Additionally, these fees should be made public.

They also should be fair. CCA fully supports Chairman Pai’s pole attachment proposals, including expanded FCC jurisdiction over pole attachments and reviewing the cost of access to poles. Similar to other cost proposals, pole attachment costs should be related to the cost to attach to the pole. The FCC

does not have jurisdiction over poles owned by other government entities or those owned by railroads. Congress should expand FCC jurisdiction to bring down pole attachment costs and clarify that Section 253 requires all fees to be issued on a non-discriminatory and competitively neutral basis applicable to *all* rights-of-way users, not just between wireless providers.

With respect to historic review, siting a wireless tower has been designated as a “federal undertaking” because carriers seeking to deploy broadband infrastructure are dependent on federally licensed spectrum to provide service. Many small wireless deployments also are a “federal undertaking,” or, even if exempt and already deployed, can still necessitate Section 106 review under the NHPA under certain circumstances. Any deployment that qualifies as a “federal undertaking,” must include additional reviews and fees, particularly under Section 106 of the NHPA. Congress should narrowly tailor application of Section 106 to ensure that mobile deployment efforts are not frustrated where full Section 106 review is not necessary and to include wireless carriers in the same technologically neutral regime as other providers that do not depend on licensed spectrum to provide service. This is a competitive disadvantage in areas where wireless carriers compete against fixed wireline or unlicensed wireless services to provide broadband to consumers.

Tribal review, in particular, often entails unnecessarily high costs, many seemingly unrelated to the actual cost of review or the presence of a tribal interest in a historic property. Considering the need to deploy advanced mobile services to meet skyrocketing consumer demand for mobile data, benefiting all Americans, Congress or the FCC should introduce practical and reasonable limitations on Tribal review to bring down deployment delays and costs while appropriately addressing Tribal concerns. Tribes should be an ally in the broadband deployment process—not an opponent. Considering the FCC’s Mobility Fund II Order estimates 340 million dollars will be reserved to create new broadband opportunities on Tribal lands, Congress and the FCC should foster partnerships between Tribal Nations and broadband providers.

Compliance costs associated with NEPA also require attention. The FCC broadly excludes collocations from NEPA review, but *not* the vast majority of new poles and support structures needed to complete a 5G project. Congress should provide that new support poles are not a “major federal action” under NEPA, at least new support poles in a right-of-way under 125 feet. Congress also should introduce shot clocks for certain milestones in the FCC’s environmental assessments (EAs), including the environmental review dispute resolution.

Cost-based and appropriate fees, similar to opportunity costs associated with streamlining reviews and eliminating barriers to deployment, allow carriers to invest more with fewer resources. This is particularly important for carriers serving high cost areas or with support from the limited resources of the Universal Service Fund. CCA urges Congress to support policies that allow competitive carriers to put their resources towards deploying mobile broadband that will spur economic growth and meeting consumer demands.

Standardized Data

Quality data should guide policymakers when making decisions about infrastructure, especially decisions regarding where infrastructure deployment is most needed. Ubiquitous mobile broadband coverage will fail without the foundation of accurate broadband coverage data. It is imperative that Congress, the FCC, and consumers have an accurate view of where robust services are available based on *standardized, actionable data*. When analyzing wireless coverage data, seemingly slight discrepancies can have significant impacts on outcomes that skew results. Factors including propagation measurement, map resolution, and clutter factor, which reflects the presence of vegetation or other structures, can render data unusable for combining or comparing other carrier reported data. For example, a difference of only -5 decibel-milliwatts (dBm) loss propagation results in a difference of 100% geographic coverage. 100%! As that increases to -10 dBm, the geographic coverage difference approaches 300% in rural areas. It is clear that measurements need to be standardized.

Data that reflects consumers' real world experiences may be most important in the context of Mobility Fund Phase II (MFII). Adopted by the FCC earlier this year to meet Congress's mandate to provide reasonably comparable services in urban and rural America, MFII attempts to preserve and expand mobile broadband in high cost areas. However, before moving forward with auctioning nearly \$5 billion in support over the next ten years, the FCC must take steps to improve the data that determines which areas are eligible for support. CCA commends the FCC for including a challenge process in the MFII Order, and for releasing a Further Notice of Proposed Rulemaking to determine the factors of a challenge process, but significant work remains to correct and standardize the underlying coverage data. FCC Chairman Pai made this clear when he recently noted his experience of insufficient mobile broadband coverage while driving from Wichita, KS to Des Moines, IA – despite the FCC's Form 477 data showing the entire route blanketed in 4G LTE coverage.

I imagine that each of you could instantly spot overstated coverage in your districts despite what the FCC's 477 data depicts. In fact, Representative Dave Loebsack recently introduced H.R. 1546, the Rural Wireless Access Act of 2017, to address this very problem. As Representative Loebsack noted, without accurate coverage maps, resources will not be directed to the areas that need them most. CCA supports Representative Loebsack's legislation and other efforts to correct the flaws of the Form 477 data before the FCC determines what rural areas will be eligible for USF support, locked-in for the next 10 years, and welcomes continued Congressional oversight and involvement to get this right.

Spectrum Access Impacts Mobile Broadband Deployment

Even before construction begins, carriers must have access to spectrum to provide mobile broadband services to customers over physical infrastructure. Particularly in rural areas, having access to low-band spectrum, below 1 GHz, is critical to building out coverage with fewer cell sites due to its propagation characteristics. For example, spectrum at 700 MHz will propagate nearly 3.5 times further than spectrum at 2100 MHz in the AWS band. The coverage propagation characteristics reach even

further with 600 MHz spectrum that is being reallocated for mobile broadband use through the incentive auction. Once put to use, this 600 MHz spectrum will be vital to expanding mobile broadband coverage into unserved areas. CCA commends this Committee for its critical role in authorizing the incentive auction, which is the second largest spectrum auction in FCC history with 84 MHz of reallocated spectrum, 70 MHz allocated for mobile broadband use, and \$7 billion provided to the Treasury for deficit reduction. CCA members must quickly put this spectrum to use to expand mobile broadband coverage and serve their consumers. Therefore, Congress must continue its oversight of the statutorily-created repacking process to ensure broadcasters complete construction of their new channel within 36 months or sooner and cease operations no later than 39 months post-auction. In addition, Congress should support efforts to expedite the transition, especially in rural areas.

Nevertheless, in all areas, carriers can add capacity to their networks to handle growing consumer demands through reusing spectrum more frequently by adding additional cell sites or by gaining access to additional spectrum resources. As carriers begin to put 600 MHz spectrum to use, they will immediately add both capacity and coverage to existing sites. Building on the success of the incentive auction, Congress also should support efforts to allocate additional spectrum resources for mobile broadband use, including at low-, medium-, and high-bands and both licensed and unlicensed. Additional spectrum is needed to keep up with consumers' demand and to power new connections including the Internet of Things. That said, additional spectrum alone will not suffice for the United States to remain the leader in mobile broadband, and must be paired with reforms to streamline deployment, reduce time delays, and rein in fees.

CCA is committed to working with Congress, the FCC, and the Administration to advance policies that support expanded mobile broadband infrastructure nationwide. Meeting broadband infrastructure challenges, especially in rural America, is critical to job creation and economic development in the 21st Century. Thank you for the opportunity to testify at this important hearing, and I welcome any questions.